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STATE OF NEW YORK

FOURTH ANNUAL REPORT

OF THE

CONSERVATION COMMISSION

1914

DIVISIONS OF LANDS AND FORESTS AND FISH AND GAME

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FOURTH ANNUAL REPORT

OF THE

CONSERVATION COMMISSION

1914

ALBANY, N. Y., *January* 15, 1915

HON. EDWARD SCHOENECK, *Lieutenant Governor:*

HON. THADDEUS C. SWEET, *Speaker of the Assembly:*

GENTLEMEN.— Herewith in accordance with law we transmit to the Legislature our Fourth Annual Report.

Respectfully yours,

CONSERVATION COMMISSION
By ALBERT E. HOYT
Secretary to the Commission

STATE OF NEW YORK

CONSERVATION COMMISSION

GEORGE E. VAN KENNEN, Ogdensburg
JOHN D. MOORE, New York.....
PATRICK E. McCABE, Albany..... } *Commissioners*

JAMES J. FOX, Brooklyn.....*Deputy Commissioner*
ALBERT E. HOYT, Albany.....*Secretary to Commission*
JOHN J. FARRELL, Troy.....*Assistant Secretary*
RICHARD W. SHERMAN, Utica.....*Chief Engineer*
MATTHEW H. HOOVER, Lockport.....*Chief of Publication*

FOURTH ANNUAL REPORT

OF THE

CONSERVATION COMMISSION

1914

TRANSMITTED TO THE LEGISLATURE JANUARY 15, 1915

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STATE OF NEW YORK

No. 22

IN ASSEMBLY

JANUARY 18, 1915

FOURTH ANNUAL REPORT

OF THE

CONSERVATION COMMISSION

To the Legislature:

The near approach of a convention to revise the Constitution of the State must focus attention upon the major problems of conservation as never before.

The trend of legislation, not only at the session of 1915, but for years to come, will largely be determined by the debates of the Constitutional Convention and the popular discussions incident thereto.

Twenty-one years have elapsed since last the State of New York undertook a general revision of its organic law. Boys who were in the cradle then, are voters now. Ideas which were in their infancy then, are in their maturity now; on the other hand policies then considered wise, are now abandoned and forgotten. At the present juncture in the world's affairs, twenty-one years is a long time, and during such a period great changes occur in circumstance, in condition and in popular thought. Nowhere has this been more manifest than in the conservation movement; and nowhere is there greater opportunity for wise modification of

the fundamental law than in relation to certain of the phases thereof.

At the same time, there are many aspects of conservation wherein the policy of the State is well defined and established; such, for example, as the protection and reproduction of the forests, and the protection and propagation of fish and game. The difficulties met in dealing with these phases of conservation are the everyday problems, first of finding the necessary money, and second, of using it with good judgment guided by the light of experience. The drawbacks along these lines are such as pertain to the whole State government. The calls upon the State for increased governmental activities are recurrent and numerous; but the people demand strict economy, and insist that the State must live within its means. To reconcile these conflicting demands is a problem requiring wise statesmanship; but it is not peculiar to the field of conservation.

CONSERVATION VIRTUALLY SELF-SUPPORTING

While the production of revenue is not the major purpose of the conservation movement, nevertheless the Conservation Commission collects large sums which go to aid the public treasury. For the fiscal year ending September 30, 1914, the total receipts of this Commission turned into the State Treasury amounted to $381,116.86. This is a record, our total receipts for 1913 having been $316,407.87; for 1912, $256,002.84, and for 1911, $258,226.65.

A conservative computation of the commercial value of the output of the fish hatcheries and the game farm, including brood stock, for the last fiscal year, would add $215,454.62 thereto.

In other words, the Conservation Commission produced last year direct revenues of $381,000 plus an indirect value of $215,000, making a total in money or its equivalent of $596,000, as against a total departmental expenditure for all purposes of $640,000. Judged by the tests which would be applied to a private business, conservation virtually supports itself.

I. THINGS ACHIEVED

Conservationists may congratulate themselves that some things are settled, and settled right.

Everybody to-day believes that the State's remaining wild life should be conserved, through the establishment of close seasons and the employment of an adequate protective force. Some may hold that there should be a longer open season for this species or a shorter open season for that, but upon the broad general principle of thorough and efficient protection of fish and game public sentiment is a unit and the policy of the State is not subject to change.

Propagation of Fish and Game

So too as to propagation of fish and game. The State is committed to the policy of establishing and operating sufficient fish hatcheries to restock its waters. In this line of endeavor New York is far ahead of any of the sister states; and within the past two years the Legislature has made appropriation for the extension thereof through the purchase and equipment of two new hatcheries. This Commission since its creation in 1911 has made every effort to increase the number and species of aquatic animals propagated from the various State hatcheries, and has on the average made a much greater distribution than ever before, reaching the maximum in 1913, when the total number distributed was 1,287,255,120. During the last fiscal year, with materially reduced funds for maintenance, but with additional hatchery activities imperatively required, we were able to propagate and distribute 566,543,016 fish.

Of the 1,287,255,120 hatchery output for 1913, 520,000,000 were edible blue crab fry. The year in question (1913) is the only one in which this species has been at all extensively propagated. In 1908 there was an output of 4,500,000 blue crab fry and 6,000 adults; in 1910, 56,000,000 fry and 7,500 adults; in 1912, 2,000 adults. The hatchery output for 1914 (566,543,016) was about five or six-sevenths of the normal output for the past four years.

The run of blue crabs is extremely variable; in 1913 it was phenomenal, while in 1914 it was not as great as usual.

The following tabular comparison shows the output of the State fish hatcheries for the four-year period beginning with 1911, and the four-year period immediately prior thereto:

Total output from State hatcheries:

1911	701,448,394
1912	730,434,933
1913	1,287,255,120
1914	566,543,016
Average output per annum, four years, 1911–1914	821,420,366
1907	250,656,600
1908	394,520,106
1909	530,277,221
1910	537,295,975
Average output per annum, four years, 1907–1910	428,187,476

The State game farm established some years ago in Chenango county has been remarkably successful. During the past fiscal year there were distributed therefrom 2,949 pheasants and 31,096 pheasant eggs. The Legislature of 1914 provided for the purchase and equipment of two new game farms, one to be located in Jefferson county, and one on Long Island. Land has been secured for the Jefferson county farm, and it will be in operation in the near future. For the proposed Long Island game farm the Commission has selected a tract of 139 acres in the town of Brookhaven, considered to be well adapted to the purpose. The Long Island game farm will, it is expected, be in operation by spring.

FIGHTING FOREST FIRES

Equally well established is the policy of the State in protecting its forests from fire and against trespass, or theft of timber. New York today protects against fire some 7,270,000 acres, of which the State owns 1,820,000. The system of fire protection now in operation in this State is thoroughly modern and effective. The installation of a chain of mountain observation stations, each hav-

ing its watchman, equipped with telephone, has largely solved the problem. By detecting forest fires at their inception and communicating with the source of danger it is possible to overcome them before great loss can occur.

In 1914 the total number of mountain observation stations is 51
In 1910 the total number of mountain observation stations was 20
Increase in installation, 1911–1914, is 31

In other words, there are two and one-half times as many mountain observation stations installed today as there were four years ago. Of these 51 mountain stations, 49 were operated during the 1914 fire season.

The State has recently experienced three severe forest fire years, 1903, 1908 and 1913. The present up-to-date system of fighting forest fires was not installed until after the year 1908; therefore, the following table of comparison is germane as well as instructive:

	Damage caused by forest fires	Acres burned	Cost of extinguishing
1903	$864,082	464,189	$153,763 95
1908	802,135	368,072	189,661 51
1913	51,445	54,796	43,203 20

During the past year the total area burned by forest fires was 13,837 acres; total damage, $14,905; cost to extinguish, $13,978.18; total number of fires of all kinds, 413.

The question the mountain observation station must answer is, Does it detect fires in time to avert damage or greatly lessen it? In the light of experience, the answer must be affirmative. The system is no longer an experiment. It has stood the test; it has proved its worth.

The total number of fires reported in 1908 was 605; in 1913, 688. All fires discovered, no matter how small, were required to be reported in 1913; some small fires which burned less than an acre were not reported in 1908. There were more fires in 1913 than in 1908. There were seven-eighths as many railroad fires in 1913 as in 1908 — 78 as against 89. In the 89 railroad fires in 1908, the average acreage burned was 1,601 acres; average

COMPARISON OF FOREST FIRES, 1908 AND 1913

	Year			
	1908		1913	
Total number of fires	605		688	
Total area burned	368,072 acres		54,796 acres	
Average area per fire	608 acres		79 acres	
Total damage	$802,135		$51,445	
Damage per fire	$1,326		$75	
Total expenditures to extinguish	$189,661		$43,203	
Average cost to extinguish	$313		$63	
Area protected	8,443,760 acres		7,270,000 acres	
Per cent. of area burned	4.4 per cent		0.7 per cent	
Cost per acre for protection	2.2 cents		1.4 cents	
	No.	Area	No.	Area
Railroads caused	89	142,471 acres	78	260 acres
Hunters caused	100	75,212 acres	14	432 acres
Lightning caused	9	439 acres	26	17,254 acres
Fishermen caused	19	1,990 acres	120	15,683 acres

Note.— Minor fire causes not enumerated.

damage, $3,802. In the 78 railroad fires in 1913, the average acreage burned was three acres; average damage, $7. Oil-burning locomotives, which were not in use in 1908, were used on about a quarter of the mileage in the fire towns in 1913. The reduction in total area burned, from 368,072 acres in 1908 to 54,796 acres in 1913; from an average area per fire of 608 acres to 79 acres; from a total damage of $802,135 to $51,445; from an average damage per fire of $1,326 to $75; from a total cost to extinguish of $189,661 to $43,203; from an average cost per fire of $313 to $63; from a percentage of protected area burned of four and two-fifths per cent. to seven-tenths of one per cent.; from a cost per acre for protection of two and one-fifth cents to one and two-fifths cents — all this must largely be attributed to the improved methods of preventing and detecting forest fires employed in 1913, but not in use in 1908.

The mountain observation system is now in use by the United States government, in several of the States, and in Canada. Of the important States, New Jersey alone lacks a full equipment of mountain stations. New Jersey last fall suffered the destruction by fire of 200,000 acres — one tenth of its protected forest area.

USE OF OIL-BURNING LOCOMOTIVES REQUIRED

In March last, the New York Central and Hudson River Railroad Company petitioned the Public Service Commission for relief from an order made by that Commission on April 1, 1909, which required the use of oil-burning locomotives on day trains operated during the fire season upon the Adirondack lines. This petition was based upon grounds of economy, the railroad company alleging that to burn oil in its locomotives involved an increased expenditure per annum of about $90,000; furthermore, it was asserted that an improved type of coal-burning locomotive, perfected since 1909, could safely be relied upon to prevent the escape of sparks, coals, and cinders.

The granting of this application was strongly opposed by the Conservation Commission, with the co-operation of the Association for the Protection of the Adirondacks, the Empire State Forest Products Association, the International Paper Company, and others. It was demonstrated to the satisfaction of the Public Service Commission that in view of the disastrous results of railroad fires in the past, the public interests involved were too vast

to permit of experiment, and that the preservation of the forests was of far greater moment than economy in railroad operation. The application was therefore denied.

PREVENTABLE FIRES

Statistics for the year 1913 are pertinent as indicating the damage done by preventable fires:

Fires caused by	Number of fires	Acres burned	Value of property destroyed
Smokers	224	7,539	$9,910
Fishermen	120	15,683	6,962
Campers	64	398	1,805
Hunters	14	432	217

The figures vary from year to year, but the proportion remains relatively the same. No statute, no order or regulation by a commission, can guard the forests against wanton carelessness; no vigilance of forest ranger or mountain observer can undo the mischief, once done.

Of all men, the camper, the hunter, or the fisherman, should be the last to put the great "popular playground" in jeopardy through preventable fires.

CONSERVATION IN HOLY WRIT

'Among the judgments which the Lord commanded Moses to set before the chosen people, in the wilderness, was the following (Exodus xxii, 6):

> "If fire break out, and catch in thorns, so that the stacks of corn, or the standing corn, or the field, be consumed therewith, he that kindled the fire shall surely make restitution."

NEW YORK'S FOREST DOMAIN

Of the 1,820,000 acres of land owned by the State, and located chiefly in the Adirondack and Catskill Parks, about 769,139 acres were acquired by purchase, and the remainder chiefly by tax sales or by the direct appropriation thereof. Of the State's land holdings, about 70,000 acres are virgin forest; about 1,430,000 acres are cutover lands with commercially valuable tree

growth; about 200,000 acres are lands under water, while the remaining 120,000 acres are waste and denuded lands.

Twenty million dollars would be a conservative estimate of the commercial value of New York's Forest Preserve.

FOREST REPRODUCTION

In order to conserve this vast forest domain for future generations to enjoy, the Conservation Commission has sought not only to reforest the waste and denuded lands owned by the State itself but to aid and encourage reforestation of privately owned lands adjacent thereto.

The advancement made in reforestation in this State during the period since the creation of the Conservation Commission, in 1911, may fairly be compared with the two four-year periods next preceding that year, as follows:

	1903–'6	1907–'10	1911–'14
Trees planted on State lands	577,955	1,341,205	2,636,650
Trees supplied for private planting	None	2,712,750	10,480,843
Trees given to State institutions	None	17,350	2,263,775

In less than four years the Conservation Commission has planted on denuded State lands about one and one-half times the total planted for eight years prior to its creation. Moreover, during the same period this Commission has supplied for the reforestation of private lands some 10,000,000 young forest trees, about four times the number furnished for that purpose in all the years prior to 1911.

During the past year the total number of trees planted on State land was 1,094,150; trees given to State institutions, 908,025; trees sold to private owners, 2,609,863.

There are today in our State tree nurseries 32,900,000 young trees, of which 10,000,000 are available for 1915 planting.

In regard to all this, the State policy is beyond peradventure settled; no one objects to the State's "going into the tree business"; not even the most pronounced individualist finds it too

paternalistic or socialistic for the State to supply trees at cost to private owners and free of charge to State institutions.

During the past year the State has bought 1,711 acres of forest land. This purchase was an inheritance due to the final perfecting of title to tracts contracted for by our predecessors. The purchase of forest lands is today suspended, through lack of funds available therefor.

CUBA RESERVOIR

The Legislature, in 1913, committed to this department the administration of the Cuba Lake Reservoir in Allegany county, formerly a part of the canal system of the State. This commission has instituted a system of leasing lands adjacent to the reservoir for use as summer homes and for agricultural purposes and has received from the lessees a total of $2,642.20, of which $2,141.20 was received and turned into the State Treasury during the fiscal year covered by this report. It is our plan next spring to plant trees and make other betterments to this property which will not only improve its appearance but enhance its value.

TRESPASS ON STATE LAND

The great betterment of conditions as to trespass on State land and timber thievery cannot be more clearly shown than through tabular comparison covering the years just preceding, and the years subsequent to the creation of the Conservation Commission in 1911:

	Trespass cases reported	Computed value of material	Average damage per case
1909	83	$39,063 07	$470 64
1910	104	20,054 29	192 82
1911	46	1,499 20	32 59
1912	27	502 23	18 60
1913	16	2,008 25	125 51
1914	14	157 42	11 24

This unprecedented showing of removal by trespassers of less than two hundred dollars' worth of timber last year has not occurred by chance. It has been brought about by determined enforcement of the law and insistence on penalties. Today it may

fairly be said that deliberate theft of State timber is a thing of the past. Practically all trespasses now arise through honest dispute over boundary lines. The day has gone by, let us hope never to return, when private interests could make comfortable arrangements with the State permitting them to cut off all the valuable timber on condition that they should leave the State in undisturbed possession of the denuded lands and the privilege of paying taxes and upkeep thereon.

A decision but lately made by the Court of Appeals in the famous Santa Clara land case, which had been in litigation for a decade, establishes the principle persistently asserted by this Commission, that the State cannot be divested of title to its forest lands save through the courts only; that no public official can stipulate or barter or give away the State's rights of ownership therein. This momentous decision should never be weakened, cheapened or surrendered through official complaisance or popular indifference or forgetfulness of the past.

PROTECTION OF FISH AND GAME

By chapter 312 of the Laws of 1912, a codification of the fish and game laws prepared by this Commission, the game protective force of the State was materially enlarged and strengthened. The total number of game protectors thereby provided was 125, an increase of thirty. Last year the Conservation Law was further amended so as to give twenty more game protectors, but the Legislature failed to make appropriation for the new men.

The reorganization made by this Commission has divided the State into twelve protective divisions, the protectors in each district to report to a division chief and he in turn, through the Chief Game Protector, to the Commission. One hundred regular game protectors and five fisheries protectors constitute the field force. While inadequate to police such a State as New York against violators of the Conservation Law, the protective field force has rendered efficient service, as shown by the following comparative figures:

	1911	1912	1913	1914
Cases prosecuted by protectors....	1485	1695	2622	2604
Successful prosecutions	1321	1499	2333	2296

It may be argued that number of arrests made by a game protector is not the ideal test of efficiency; in other words, that the desideratum is a condition wherein there would be no arrests, because none would be necessary. It may be argued, too, that "a little brief authority" sometimes makes men unreasonable and even tyrannical and that in given instances a game protector may have used his power arbitrarily, oppressively, or even corruptly.

Nevertheless, in this year of grace it will scarcely be maintained that if there were no arrests, it would mean that there were no lawbreakers; and the figures show so close an approximation of convictions to arrests as to disprove any allegation, if such there be, of extensive abuse of power by the game protectors. A jury may refuse to convict where an officer feels constrained to arrest.

ADDITIONAL PROTECTION

Among the new powers vested in the Conservation Commission by the Laws of 1912 was that of granting additional protection, beyond that given by the Conservation Law, to any species of fish or game, whenever disease, danger of extermination, or other like cause, may warrant such precautionary measures. The Commission has been frequently called upon to exercise this authority and by reason thereof has held numerous public hearings throughout the State which have demonstrated widespread popular interest in the problems of conservation.

At the present time (January, 1915) the following additional protection orders are in force and during the periods stated and in the localities severally named all taking is prohibited as to the species named:

SPECIES	County	Period	Expire
Pheasants	Herkimer	Two years	Oct. 1, 1916
Pheasants	Otsego	Two years	Oct. 1, 1916
Pheasants	Delaware	Two years	Oct. 1, 1916
Pheasants	Chenango	Two years	Oct. 1, 1916
Pheasants	Oneida	Two years	Oct. 1, 1916
Pheasants	Montgomery	Two years	Oct. 1, 1916
Pheasants	Lewis	Two years	Oct. 1, 1916
Pheasants	Washington	Two years	Oct. 1, 1916
Pheasants	Warren	Two years	Oct. 1, 1916
Pheasants	Schenectady	Two years	Oct. 1, 1916
Pheasants	St. Lawrence	Two years	Oct. 1, 1916
Pheasants	Franklin	Two years	Oct. 1, 1916
Pheasants	Clinton	Two years	Oct. 1, 1916
Pheasants	Essex	Two years	Oct. 1, 1916
Pheasants	Allegany	Two years	Oct. 1, 1915
Pheasants	Cattaraugus	Two years	Oct. 1, 1915
Pheasants	Chautauqua	Two years	Oct. 1, 1915
Pheasants	Tioga	Two years	Oct. 1, 1915
Ruffed grouse	Genesee	Two years	Oct. 1, 1916
Black, gray and fox squirrels	Genesee	Two years	Oct. 1, 1916
Cotton tail rabbits	Richmond	Oct. 1 to Nov. 14, and Jan. 1 to Jan. 31	In force until revoked
Black bass	Lake Erie and Niagara river.	June 16 to June 30	In force until revoked
Black bass	Schroon and Paradox lakes.	June 16 to July 15	June 15,1917
Black bass	All waters in the towns of Chester, Horicon and Johnsburg, Warren Co.	June 16 to July 15	June 15,1917
Pike and pike-perch	Butterfield Lake, Jefferson County	Tip-ups prohibited	Jan. 1, 1917
Bass, pike, pickerel, perch and bullheads.	Grass Lake, towns of Alexandria and Rossie, counties of St. Lawrence and Jefferson	Taking through the ice prohibited	Jan. 1, 1917

HUNTING ACCIDENTS

During the 1914 deer season, there were but five deer hunting accidents, three of which were fatal. Not one of these victims, so far as any evidence shows, was mistaken for a deer. Two killed were so mistaken in 1913, out of total hunting fatalities of nineteen that year. Seventeen minor hunting accidents occurred in 1914 in the pursuit of small game. The State of New York issues every year more than 200,000 licenses to hunt and pursue game and so far no law has been devised which limits or can limit the use of firearms to those who by experience, temperament and sobriety are at all times fit to use them, without peril to themselves and others. Taking these facts into account, this year's record as to hunting accidents might easily be worse. Nor is there reason to doubt that the so-called "buck law" has proved a conservator of human life and has averted many a tragedy of the North Woods.

OYSTER CULTURE, SANITARY INSPECTION, ETC.

This Commission is charged by law with specific duties of bacteriological inspection of shellfish grounds; but adequate performance thereof is impossible because of failure to make the needful appropriation therefor. By working with the oyster-growers and co-operating with them in securing, so far as may be, the elimination of sewage and other unwholesome conditions, and by collaborating with the public health departments of State and nation, we have been able to accomplish results alike for the oyster industry and the consumer. But we respectfully request the Legislature either to give us funds for bacteriological examinations, or, if such examinations are deemed unnecessary, to amend the law and do away with a situation unfair alike to the public, to this Commission, and to the oyster-growers, whereby we stand charged with grave responsibilities relative to the public health while denied the means requisite for the discharge thereof. The ultimate cost of such examinations, we may add, is imposed by statute upon the oyster industry and not upon the State.

The Conservation Commission through its Bureau of Marine Fisheries is engaged in making a systematic canvass among the

oyster-growers to determine the number of men, number of boats, and amount of money engaged in the oyster industry in the State of New York. These facts, which will soon be collated, will be of great value for departmental purposes and will serve as a basis for constructive legislation.

An enormous and unprecedented set of young oysters on public lands at this time promises to yield a great revenue to the "free baymen." It is the duty of the Conservation Commission to safeguard the right of these "free baymen," as well as of the growers who have leased lands from the State.

We renew our recommendation previously made for the repeal of the archaic and conflicting legislative enactments, dating from 1866 to 1910, whereby certain towns in Long Island have been given the right to lease lands under water within the town limits. Practically all the Atlantic and Gulf states have done away with local regulation and established the principle of concentrated control by the State of the leasing of oyster lands. New York should not lag behind the sister states in this important matter.

The balance sheet of the Bureau of Marine Fisheries for the past fiscal year makes a good showing. Its receipts exceed those of 1913 by $6,403.89, and during the year 3,834.2 acres of oyster land have been leased, an increase over 1913 of 1,638.6 acres.

Migratory Bird Law

We again urge that the State law and the federal regulations relative to migratory birds be made consistent with one another. Efforts to this end unfortunately failed in the closing hours of the last Legislature. Steps since taken by the United States authorities have measurably improved the situation, but there still remains conflict in certain particulars. This should not be. It needlessly confuses the law-abiding and affords a pretext to the lawless. The principle of federal protection to migratory birds is sound and undebatable and is everywhere accepted by true conservationists. The differences between the State law and the federal regulations are neither many nor difficult to reconcile.

APPORTIONMENT OF WATER SUPPLY

During the past year, increased activity in waterworks construction has resulted in a large number of applications to this Commission for approval of water supply projects. Frequent complaints as to rates and service, both of waterworks corporations and of municipalities, have continued to evince a popular demand for State supervision and regulation thereof.

One hundred sewerage and drainage projects, having received the approval of the State Department of Health, were submitted to this Commission for approval, the great majority whereof have been decided favorably.

The work of the Conservation Commission in equitably apportioning the State's water supply resources among the inhabitants thereof is briefly indicated by the table hereto annexed:

No.	NAME	Application filed	Disposition of application	Permit to operate
40	New York City-Suffolk county sources	.....	Withdrawn Nov. 26, 1913	.....
109	Baldwin Water Company	.....	.....	Oct. 13, 1913
119	Village of Port Leyden	.....	.....	Nov. 25, 1913
122	Sodus water district	.....	.....	Dec. 16, 1913
125	Village of Brockport (temporary)	.....	.....	May 19, 1914
125	Village of Brockport (third supplemental application)	May 4, 1914	Approved May 18, 1914	.....
127	Madrid water district	.....	Rejected May 16, 1914	.....
131	Village of West Winfield	.....	.....	Sept. 9, 1914
135	Village of Mexico (partial)	.....	.....	April 17, 1914
136	Marion water district	.....	.....	Sept. 25, 1914
138	Greenwich Union Water Works Co	.....	.....	Sept. 9, 1914
142	Village of Bloomingdale	.....	Pending	.....
144	City of Yonkers	.....	Approved Nov. 7, 1913	.....
147	Village of Lisle	.....	Pending	.....
148	Hamlin water district	Nov. 6, 1913	Approved Mar, 19, 1914	.....
149	Sylvan Spring Water Co	Nov. 6, 1913	Approved Jan. 13, 1914	.....
150	Williamson water district	Dec. 4, 1913	Approved Dec. 31, 1913	.....
150	Williamson water district (supplemental application)	May 25, 1914	Approved June 1, 1914	.....
151	Clover street water district	Jan. 7, 1914	Approved Jan. 29, 1914	.....
152	City of Mount Vernon	Jan. 8, 1914	Pending	.....
153	Village of Sidney	Jan. 30, 1914	Pending	.....
154	Village of Centerville Station	Feb. 6, 1914	Approved May 18, 1914	.....
155	Village of Franklin	Feb. 13, 1914	Approved May 18, 1914	.....
156	Village of Franklin ille	Feb. 16, 1914	Approved May 18, 1914	.....
157	Village of Morris	Feb. 24, 1914	Approved April 1, 1914	.....
158	Village of Arkport	Mar. 11, 1914	Approved May 18, 1914	.....
159	Sea Breeze water district	April 6, 1914	Approved May 19, 1914	.....
160	Village of Albion (second application)	April 28, 1914	Approved June 11, 1914	.....
161	Village of East Syracuse	May 7, 1914	Approved June 4, 1914	.....

No.	NAME	Application filed	Disposition of application	Permit to operate
162	Village of New Paltz	May 20, 1914	Approved June 5, 1914	.....
163	Monroe avenue water district	May 20, 1914	Approved June 11, 1914	.....
164	City of Watervliet	May 25, 1914	Pending	.....
165	Riverhead water district	June 2, 1914	Approved Sept. 8, 1914	.....
166	New York City-Schoharie sources	June 2, 1914	Pending	.....
167	Village of Lyons	June 8, 1914	Approved Aug. 20, 1914	.....
168	Varysburg Water Co., Inc	June 27, 1914	Approved Sept. 8, 1914	.....
169	Village of Naples	July 6, 1914	Pending	.....
170	Village of Wappingers Falls	July 21, 1914	Pending	.....
171	Village of Palmyra	Aug. 1, 1914	Approved Sept. 30, 1914	.....
172	Village of St. Johnsville	Aug. 14, 1914	Pending	.....
173	Town of Greece, Ridge Road water district	Aug. 22, 1914	Approved Sept. 29, 1914	.....
174	Village of Port Henry	Sept. 17, 1914	Pending	.....

Union Water District Projects

Acting under the provisions of chapter 233 of the Conservation Law, the cities of Cohoes and Watervliet, together with the village of Green Island and the town of Waterford, on June 23, 1913, organized the Charlton Union Water District. Thereupon the Commission through its chief engineer caused careful examinations and surveys to be made, and designed a gravity water supply system with filtration, together with maps, plans and estimates for a complete water supply, and on June 15, 1914, made its report to the Charlton Union Water District. The Commission is convinced that the best interests of the municipalities incorporated in the Charlton Union Water District would be subserved, as to their public water supply, by the carrying out of the Charlton Union Water District project. We believe that the provisions of the Conservation Law for Union Water Districts will be of very great value when its features are more generally understood.

Stream Surveys

Power surveys have been made on the Saranac river, the Raquette river and the Schoharie creek, and partly as to the St. Regis river. It is intended to make a separate pamphlet report, on the lines of the Oswegatchie report published last year, as to each of these important streams, and also to include the same information in the bound annual reports of the Commission.

Supervision Over Docks and Dams

By an amendment to section 22 of the Conservation Law enacted in 1914, all the docks of the State, excepting those forming a part of the canal system and those under the jurisdiction of a dock department in cities of the first class, have been placed under the jurisdiction of the Commission. The necessity for this law became apparent when a dock at Eagle Park on Grand Island in the Niagara river failed, resulting in the drowning of a large number of persons. As the Legislature neglected to make appropriation for carrying out the provisions of the amended law as to docks, the Commission has been able to do but little in this direction.

The past year has been one of marked activity in the construction of dams. Plans and specifications for the construction or reconstruction of forty-nine such structures have been approved by the Commission. In a number of instances, before approval was granted, the Commission required changes in the plans and specifications submitted. The dams for which plans and specifications have been approved, with the date of approval, serial and location numbers, name of watershed, name of locality, name of owner and purpose of construction are as follows:

Date of approval	Serial number	Location number	Name of watershed	Name of locality	Name of owner	Purpose
Oct. 14, 1913	124	391	Oswegatchie river	Benson Mines	Benson Mines Co	Hydro-electric.
Oct. 20, 1913	102	555	Lake Erie	Gowanda	Keyes Electric Co	Hydro-electric.
Oct. 23, 1913	130	937	Upper Hudson river	Underwood	Wawonaissa club	Fish.
Oct. 30, 1913	133	131	Mohawk river	Schenectady	Board of Supervisors	Water supply.
Nov. 7, 1913	134	596	Lower Hudson river	Otisville	N. Y. City Health Dept	Water supply.
Nov. 7, 1913	135	690	Oswego river	Ithaca	H. J. Bool Furniture Co	Power.
Nov. 10, 1913	132	537	Lower Hudson river	Beacon	City of Beacon	Water supply.
Nov. 26, 1913	136	475	Delaware river	Lew Beach	Joshua M. Kelley	Power.
Nov. 26, 1913	137	330	Lower Hudson river	Chappaqua	New Castle Water Co	Water supply.
Nov. 26, 1913	139	391	Upper Hudson river	Gloversville	C. H. Masten	Ice.
Dec. 3, 1913	140	523	Delaware river	Arena	Holmes Milling Co	Power.
Dec. 3, 1913	141	391	Oswegatchie river	Oswegatchie	Benson Mines Co	Hydro-electric.
Dec. 16, 1913	127	683	Lake Champlain	Newman	J. & J. Rogers Co	Flooding.
Dec. 16, 1913	138	702	Lake Champlain	Upper Saranac	Bartlett Carry Realty Co	Hydro-electric.
Dec. 16, 1913	142	15	Mohawk river	Cohoes	Cohoes Co	Hydro-electric.
Jan. 6, 1914	128	388	Upper Hudson river	Glens Falls	International Paper Co	Power.
Jan. 7, 1914	129	403	Upper Hudson river	Hadley	Union Bag & Paper Co	Power.
Jan. 7, 1914	143	370	Lower Hudson river	Cortland	Syracuse Suburban Water Co	Water supply.
Feb. 2, 1914	144	948	Lower Hudson river	Edgewood	John B. Carey	Scenic.
Feb. 20, 1914	145	467	Mohawk river	Gilboa	Tri-County Light & Power Co	Hydro-electric.
Mar. 18, 1914	149	635	Lower Hudson river	Pine Bush	Edward R. Senn	Power.
Mar 19, 1914	146	292–A	Susquehanna river	Binghamton	City of Binghamton	Scenic.
Mar. 30, 1914	150	844	Susquehanna river	Hartwick	Louis E. Lake	Power.
April 1, 1914	147	726	Susquehanna river	Morris	Village of Morris	Water supply.
April 1, 1914	148	597	Chemung river	Hornell	Elmhurst Land Corporation	Scenic.
April 8, 1914	151	290	Lower Hudson river	Congers	St. Rita Lake Co	Pleasure.
April 8, 1914	152	722	Lower Hudson river	Ellenville	Dwight Divine & Sons	Power.
May 12, 1914	153	300	Raquette river	Pierrepont	Hannawa Falls Water Power Co	Power.
June 9, 1914	154	142	Salmon river	Altmar	Salmon River Power Development	Power.

Date of approval	Serial number	Location number	Name of watershed	Name of locality	Name of owner	Purpose
June 9, 1914	155	505	Lower Hudson river	Westtown	Mrs. E. A. Gardner	Pleasure.
June 16, 1914	156	657	Susquehanna river	Gilbertsville	Joseph T. Gilbert	Water supply.
June 16, 1914	157	452	Susquehanna river	Center Village	Afton-Windsor Light, Heat & Power Co	Power.
June 16, 1914	158	142	Salmon river	Altmar	Salmon River Power Development	Power.
June 29, 1914	159	523–A	Lower Hudson river	Beacon	Town of Beacon	Water supply.
June 29, 1914	160	579	Lower Hudson river	Montgomery	Wm. Crabtree & Sons	Power.
July 10, 1914	161	64	Lake Champlain	Champlain	F. & J. R. Whiteside	Power.
July 16, 1914	162	1,009	Lower Hudson river	Hudson	City of Hudson	Water supply.
July 30, 1914	163	298	Mohawk river	Adirondack	Electric Power Corporation	Power.
July 30, 1914	164	394	Upper Hudson river	Hudson Falls	Union Bag & Paper Co	Power.
Aug. 27, 1914	168	715	Upper Hudson river	Indian Lake	G. F. Underwood	Logging.
Sept. 9, 1914	165	638	Oswego river	Trumansburg	Ovid Electric Co	Power.
Sept. 9, 1914	166	512	Mohawk river	Stewart's Landing	W. D. Watt Mfg. Co	Electric power.
Sept. 9, 1914	169	565	Upper Hudson river	Garnet	Frank H. Maxam	Fish.
Sept. 9, 1914	171	555	Oswego river	Locke	Nelson L. Drummond	Fish.
Sept. 9, 1914	173	389	Upper Hudson river	Hudson Falls	Union Bag & Paper Co	Power.
Sept. 21, 1914	172	356–A	Black river	Port Leyden	Homer E. Wilson	Hydro-electric.
Sept. 21, 1914	175	306	Lower Hudson river	Sloatsburg	Ramapo Mfg. Co	Pleasure.
Sept. 25, 1914	176	751	Lower Hudson river	Ellenville	Dwight Divine	Storage.
Sept. 25, 1914	177	564	Lake Champlain	Elizabethtown	Livingston Woodruff	Pleasure.

During the year improvements of twenty-four dams, by means of repairs, changes and alterations, have been required by the Commission. In the past twelve months only five dams have failed. Seventeen failed in 1913; twenty-two failed in 1912. Four of the dams which failed in the past year were built before the formation of the Conservation Commission. The remaining dam failed before completion, for the reason that precautions taken to protect it against high water during construction were inadequate. As soon as practicable, examination was made to ascertain the underlying cause of each failure and to obtain first-hand information which would avert similar casualties hereafter.

It is the purpose of the Commission to inspect and record the location and characteristics of every dam in the State, under its jurisdiction. The reports, when returned, are carefully examined and steps taken to correct any defect or weakness.

II. THINGS TO BE ACHIEVED

Thus far, in some detail, we have discussed the things achieved; the settled policies; the features of conservation upon which there is concord of opinion.

There remain to be discussed the things to be achieved; those great unsettled conservation problems as to which public opinion is still in the formative stage. These relate to conservation, development and utilization of water resources and the utilization of forest products.

Shall the Forest Preserve be "forever kept as wild forest lands?" or, shall the State permit selective cutting and sale of mature timber?

What shall the State do with the surplus waters of its canals? What shall we do with our million and a half of potential horse power, now undeveloped and unused?

Shall it be the good old policy of *laissez faire?* The flood of many a March has raced to the sea with ruin in its wake; the drouth of many an August has brought its sure heritage of industrial paralysis. But we are used to all this, and so were our fathers before us; why not our children, too?

The part which investigation could play in this drama has been played. All phases of the problem have been exhaustively investigated. Once that stage is reached, investigation means inaction and discussion means delay. The servant who buried his talent in the ground probably appointed a joint committee to investigate and report on the best way to utilize talents.

Precisely as the way to resume specie payment "was to resume," just so the way to stop wasting an energy equal to the annual consumption of 15,000,000 tons of coal is — to stop wasting it.

The time has come to act, and for good or ill, for years to come if not for all time, these great questions must now be answered.

Authority to control and regulate the material resources provided by nature is a necessary attribute of State sovereignty. The State should own and regulate the disposal of all additional water power it may create. It should make such utilization and disposal thereof as will promote the public health and public welfare, yield a public revenue, stimulate commerce and industry and cheapen the cost of light, heat and power.

NEW YORK'S WATER POWER RESOURCES

In the year 1907 the State Water Supply Commission was authorized and directed by the Legislature to devise a plan for the progressive development of the water powers of the State under State ownership, control and maintenance for the public use and benefit and for the increase of the public revenue. The same act directed the Commission to ascertain and report the water storage capacity of reservoirs created for the purpose of stream regulation, the record of rainfall, the average flow of the stream, and to estimate as nearly as practicable the water power capacity of proposed developments throughout the State.

Pursuant to this direction the State Water Supply Commission inaugurated an investigation of the power capacity and possibilities of the more important inland streams of the State. This work has been continued by its successor, the Conservation Com-

mission. Comprehensive hydrographic surveys have been made of practically all the inland streams of our State, and we have at the present time reliable data showing the power possibilities of every important inland river within the State.

No State in the Union possesses greater water power resources than New York. The St. Lawrence river on the north and the Niagara river on the west furnish immense power possibilities. No river surpasses these in volume of water and none has a more uniform flow. We have in addition a large number of inland rivers capable of vast power development. Our extensive canal improvements have likewise created many useful water powers. It has been established by careful hydrographic surveys that within the borders of this State it is commercially feasible to develop at least two million five hundred thousand horse power (2,500,000 h. p.). This is more than sufficient to supply all the needs of the State for light and for power for manufacturing and industrial enterprises. Approximately one million (1,000,000) h. p. has already been developed. There remains, therefore, within the State in round numbers one million five hundred thousand (1,500,000) h. p. undeveloped.

The advancement in the art of electrical transmission has made this vast amount of potential energy available to the inhabitants of every municipality within the entire State. The prime importance of this resource lies in the fact that this latent power is located within the borders of a State containing a population of nearly ten millions (10,000,000) of inhabitants, and is available for our vast and varied industrial needs. It is valuable because it is in the very heart of commercial activities, where there is a growing market therefor.

Two vital questions arise with respect to the policy which the State should adopt regarding, first, the water powers already developed aggregating approximately one million (1,000,000) h. p.; second, the water powers yet undeveloped approximating one million five hundred thousand (1,500,000) h. p.

By reason of the fact that every stream contains developed as well as undeveloped power sites, these two questions are so interrelated that a discussion of one will in a large measure embrace the other.

With regard to our developed water powers all agree that these should be utilized to the highest degree of efficiency and the present capacity increased wherever possible, and if need be, the agency of the State employed to accomplish this result upon some basis which will be just and equitable to the State, the mill owner, and the citizen. Various plans have been suggested and strenuous efforts made to formulate a practical policy, which so far have largely failed by reason of legal obstacles or conflicting interests.

STREAM REGULATION

A very considerable part of our water powers are situate upon inland streams where at certain seasons there is a superabundance of water, and at other times a great deficiency exists. It is, therefore, apparent that if efficiency is to be secured, storage reservoirs which will provide a regulation of the stream flow are essential. This is of prime importance. By these means the developed powers will be greatly increased, and those undeveloped made more valuable and commercially attractive. Stream regulation is in fact one of the fundamental requirements of proper economical hydraulic development.

The construction of a reservoir on the Sacandaga at an estimated cost of five millions of dollars ($5,000,000) will increase the total low-water power of the Hudson river at the developed sites below Hadley from twenty-nine thousand four hundred and ninety (29,490) h. p. to ninety-one thousand three hundred (91,300) h. p.; and at undeveloped sites from eight thousand eight hundred and eighty-five (8,885) h. p. to sixty-one thousand five hundred (61,500) h. p. In other words, the low-water power of the stream will be increased nearly four times its present capacity. These figures include the power between the Sacandaga dam and Hadley, which will be thirty-four thousand five hundred (34,500) h. p. at the minimum. Moreover, in considering this project we must remember that the commercial value of stored water is greater than that from the ordinary flow of the stream, for the reason that the mill owners can use the same at a time when their mills would otherwise be idle, thereby enabling them to increase the capacity of their plants. By the construction of the Sacandaga reservoir and a proper regulation of the stream it would be pos-

sible for the mill owners to increase their plants about fifty per cent (50%) and still run them at full capacity for the same length of time that they do at present. The potential power possibilities at undeveloped sites would be similarly increased by the construction of this reservoir. The increase to the power-producing capacity of the Hudson by such regulation would amount to eighty-three thousand five hundred and sixty (83,500) h. p. Similar results would follow on the Genesee, Black, Raquette, Oswegatchie and Saranac rivers, as appears from the following table:

INCREASE IN ECONOMIC CAPACITY OF VARIOUS STREAMS OBTAINABLE BY REGULATION

RIVER	PRESENT CONDITIONS				Regulation by	CONDITIONS AFTER REGULATION							
	HORSE-POWER AVAILABLE WITH LOW WATER FLOW		HORSE-POWER CAPACITY OF TURBINES FOR 24-HOUR CONTINUOUS POWER, 60 PER CENT. OF AVERAGE YEAR			HORSE-POWER AVAILABLE WITH LOW WATER FLOW		INCREASE OF LOW WATER POWER		HORSE-POWER CAPACITY OF TURBINES FOR 24-HOUR CONTINUOUS POWER, 60 PER CENT. OF AVERAGE YEAR		Total increase in economic capacity of stream	Estimated cost of reservoirs
	At developed sites	At undeveloped sites	At developed sites	At undeveloped sites		At developed sites	At undeveloped sites	At developed sites	At undeveloped sites	At developed sites	At undeveloped sites		
Hudson, between Hadley and Troy (including power from Sacandaga between dam and Hadley).	29,490	8,885	123,690	44,700	Sacandaga reservoir, 28.8 bil. cu. ft. regulated for Hadley.	91,300	61,500	61,810	52,615	163,600	88,350	83,560	4,661,000
Genesee, between Portage and Lake Ontario.	6,394	4,305	30,209	32,370	Portage reservoir, 13.4 bil. cu. ft. regulated for Portage.	27,987	46,040	21,593	41,735	38,760	55,190	31,371	4,588,000
Black, between Higley, Mt. reservoir and Lake Ontario.	36,517	5,591	111,663	16,860	Higley Mt. reservoir, 5.2 bil. cu. ft. regulated for dam site.	58,775	17,675	22,258	12,084	122,870	26,950	21,297	1,340,000
Raquette, between Tupper Lake and the St. Lawrence river.	4,654	14,079	26,890	83,770	Oxbow reservoir, 11.4 bil. cu. ft. regulated for Piercefield.	22,380	73,430	17,726	59,351	36,300	116,500	42,140	*2,000,000
Oswegatchie, between Newton Falls and the St. Lawrence river.	7,160	2,524	29,429	10,668	Cranberry Lake, Newton Falls and Harrisville reservoirs — Total of 11.0 bil. cu. ft.	26,974	24,808	19,814	22,284	41,508	37,712	39,123	1,518,000
Saranac, between Saranac Lake and Lake Champlain.	5,599	6,172	18,246	20,607	Saranac Lake reservoir, 4.0 bil cu. ft.	16,316	20,129	10,717	13,957	23,938	27,015	12,100	†600,000
Total for six rivers above....	89,814	41,556	340,127	208,975	73.8 bil. cu. ft.....	243,732	243,582	153,918	202,026	426,976	351,717	229,591	14,707,000

* Provisional. † Provisional only.

A study of the foregoing tabulation will show the great benefits of stream regulation in connection with the development of power.

Public Health, Safety, and Welfare

The increase of power is by no means the only benefit which will flow from stream regulation. The construction of reservoirs will impound spring flood waters which so frequently result in great injury to public and private property along our inland streams. The Sacandaga reservoir will remove at least three (3) feet from the crest of the floods at Troy, Albany, and elsewhere along the Hudson. The Portage reservoir on the Genesee will prevent the overflow of thousands of acres of valuable land in the Genesee valley and also eliminate injury to other public and private property along the stream which in the past has so often been endangered or destroyed. This menace to property is present every recurring season. No figures are available to estimate the enormous loss of property injured or destroyed by Spring freshets in this State. By proper stream regulation this destruction and waste would be greatly minimized if not wholly prevented. Like safety to property will result on the other inland rivers if properly regulated. Moreover, stream regulation will produce a more steady and continuous run of water. It will increase the flow during the dry season of the year, and convert many stagnant pools into streams of living, flowing water. Public health, safety and welfare will be greatly benefited and improved thereby.

In determining a policy for the State to adopt with respect to stream regulation, consideration should be given to the relative importance of these advantages to the beneficiaries thereof. It may be difficult, if not impossible, to estimate the full value of the benefits to the health, safety and welfare of the public. Yet in formulating an equitable plan for stream regulation all benefits accruing therefrom should be considered: first, to the mill owner from increased power; second, to the citizenry generally from the improvement to public health, the advancement of public welfare, and the safety to public and private property.

Benefit to Mill Owner from Increase of Power

It is generally conceded that the benefit to the mill owner derived from the increase of power is by far the more important. In order to secure proper regulation reservoirs must be constructed, maintained and operated. How shall these be constructed, and the cost thereof be paid? Shall the State as a whole contribute toward the expense of construction, maintenance and operation, on account of these benefits to public health, safety and welfare?

If the policy of stream regulation were made general throughout the State the benefits derived therefrom would directly or indirectly reach our entire population; and there seems, therefore, no just or equitable reason why the State as a whole should not contribute toward the cost of such development.

With regard to these questions we find that the Constitution provides that

> "The Legislature may by general laws provide for the use of not exceeding three percentum of such lands for the construction and maintenance of reservoirs for municipal water supply, for the canals of the State and to regulate the flow of streams. Such reservoirs shall be constructed, owned and controlled by the State, but such work shall not be undertaken until after the boundaries and high flow lines thereof shall have been accurately surveyed and fixed, and after public notice, hearing and determination that such lands are required for such public use. The expense of any such improvements shall be apportioned on the public and private property and municipalities benefited to the extent of the benefits received. Any such reservoir shall always be operated by the State and the Legislature shall provide for a charge upon the property and municipalities benefited for a reasonable return to the State upon the value of the rights and property of the State used and the services of the State rendered, which shall be fixed for terms of not exceeding ten years and be readjustable at the end of any term."

This provision of the Constitution is applicable to a very large proportion of our inland streams, which have their source in the Forest Preserve counties; and the fair inference is that the people

of the State favor the construction, control, maintenance and operation of such reservoirs through the agency of the State itself.

Cost to Be Borne by the State and by the Owner

We feel, therefore, that the proper policy to adopt is for the State to construct, control, maintain and operate reservoirs intended for stream regulation, and that the cost thereof be borne in part by the State and its municipalities benefited thereby, and in part by the owners of water power sites upon some basis of a just and equitable division thereof.

With regard to the payment to be made by the mill owners, serious and difficult questions arise. How shall such payment be made and provided for? Many divergent views are entertained with respect to these questions. All practically agree that the beneficiaries should be required to pay therefor. Some maintain that the real beneficiaries are the owners of power sites already developed. This view is predicated upon the proposition that undeveloped sites have no use for an increase of power which will result from stream regulation. It is also claimed, in some cases, that the owners of developed sites should not be required to contribute toward the cost of the construction, maintenance or operation of such reservoirs, for the reason that some power owners have no need for additional or increased power. These views are, of course, erroneous, for the reason that any increase in the capacity of a water power site, whether developed or undeveloped, enhances its potential value. Moreover, while the assessment of cost upon developed powers alone might possibly answer the needs and be practical for a river like the Black, where more than 85 per cent. of its available power is developed, it would utterly and absolutely fail to secure any regulation on rivers like the Raquette, where less than 25 per cent. of the available power is developed.

A glance at the foregoing table shows that the regulation of the Raquette could not and would not be made if the developed sites alone were required to pay the cost for the evident reason that the owners of such sites could not afford to bear the burden. For example, if the reservoir at the Oxbow on the Raquette river were

built at the estimated cost of two millions of dollars ($2,000,000), the construction cost would be at the rate of twenty-five dollars and ninety-seven cents ($25.97) per h. p., based upon an increase of 77,077 h. p. in the low-water power of the stream. If this cost were apportioned between the developed and undeveloped sites, then four hundred sixty thousand dollars ($460,000) would be due from the owners of developed sites and one million five hundred and forty dollars ($1,540,000) from the owners of undeveloped sites. If the entire two million dollars ($2,000,000) were assessed against the developed sites alone the charge would be at the rate of one hundred and twelve dollars ($112) per horse power. Such charge, with the cost of maintenance and operation, would be prohibitive and manifestly unfair, for the reason that the value of the undeveloped water powers would be increased by such regulation. It is apparent, therefore, that if the State aims to formulate a workable policy which will result in the general regulation of all our inland streams, some plan must be devised whereby the owners of undeveloped as well as developed powers will be compelled to bear their just and equitable share of the cost of such improvement. Inasmuch as the owners of unused and unsalable power sites would rarely if ever agree voluntarily to share the cost of such a project, it follows that a workable policy must involve compulsory payment. No provision for voluntary payment will suffice.

Power of Eminent Domain Involved

To achieve this result by legislation a valid power of taxation must be invoked, and legislation must likewise carry with it the power of eminent domain, for the reason that every project for the construction of reservoirs involves the acquisition of private property, and in some cases public property as well. No practical plan has yet been suggested which does not involve the exercise of these two sovereign powers.

For the regulation of streams, reservoirs must be constructed and private lands must be acquired as above stated. The cost of construction, maintenance and operation must be paid. Neither public nor private property can be appropriated; nor can the power of taxation be considered in this State except for a public

purpose. Neither the right of eminent domain, nor the power of taxation has been given to mill owners in this State to acquire private property for milling purposes. Nor has the enforcement of assessments for benefits derived been permitted for the development and improvement of water powers exclusive of other purposes of a public nature. These projects have always been considered private enterprises, and therefore the power of eminent domain and taxation has been denied. We believe that it will be generally conceded that this view is correct, and therefore any legislative plan designed to achieve practical results must embrace the valid power of eminent domain and taxation as well. To accomplish this the primary purpose of the statute must be public, not private.

The development of water powers and the improvement thereof by stream regulation for the production of energy for lighting public buildings, streets and highways, and for power for State, municipal and public service uses, and incidentally for industrial enterprises, would, we think, be construed to be a sufficient public purpose to validate the exercise of the necessary powers of eminent domain and taxation.

To accomplish the purposes named provision for the transmission of energy produced is essential; and moreover, this would furnish a market for power available from sites now undeveloped and the development thereof would be made practical and feasible for the reason that the same could then be used for commercial and industrial purposes, where at present no market exists. Unless some such plan is adopted to furnish a market for the power available from undeveloped sites the burden of taxation for stream regulation imposed upon unused powers would be unjust to the owners and tend to confiscation of their property.

Undeveloped Powers, Owned and Controlled by the State

Thus far we have considered stream regulation on rivers where water powers are privately owned. We will now consider the proper policy to be adopted with respect to undeveloped water powers owned and controlled by the State itself.

More than three-fourths of the undeveloped water power within the borders of the State of New York is owned and controlled

by the State itself. It is the owner of the bed of the stream beneath the waters of the St. Lawrence and Niagara rivers, and is likewise the riparian owner of lands adjacent to a large amount of available power, and it has also created much available power through the construction of its canal system. With respect to the large navigable streams the State has full jurisdiction and control over the same, subject only to the paramount right of the Federal Government to control the same in the interests of navigation. It likewise has jurisdiction over our inland rivers to the extent that the waters therein cannot be diverted for power purposes, or the flow thereof obstructed without the authority and consent of the State. No person can be said to own the water which flows in these streams. All persons have a limited right to the use thereof, dependent upon the purposes for which the same is to be employed. These rivers are considered highways for the use of the public. The riparian owners are powerless to exclude the public from the use thereof for such and other purposes. It is for this and other reasons that the water powers of the State have come to be regarded as a natural public resource. Any State policy with respect to the utilization thereof must recognize the rights of the public therein and reckon with this established sentiment.

So far the State has established no definite policy with respect to its water powers. From time to time it has granted to private individuals the right to divert water for private purposes. There is a growing sentiment opposed to such grants. The people of the State are beginning to realize that these vast resources are too valuable to be given away. The exploitation of water powers by private persons is no longer regarded with favor. The people feel they have not received adequate benefits from the grants that have been heretofore made.

The Conservation Commission, mindful of the fact that the Legislature has imposed upon it the duty of devising "plans for the progressive development of the water powers of the State under State ownership, control and maintenance for the public use and benefit, and for the increase of the public revenue," has advocated that the State itself develop its unused water powers

and distribute the energy produced thereby direct to the people at the cost of production and transmission.

So far the recommendations of our Commission have not been adopted for the reason that it has been impossible to reconcile conflicting interests. Many people believe that the policy of the development of the water powers of the State "under State ownership, control and maintenance," foreshadowed by the Legislature in 1907, is not sound; but that the development and exploitation of our water power resources should be left to private initiative. Whether the sorely needed development of our water power shall proceed under public or private auspices is a question so vital to the welfare of the State that it deserves your most earnest and thoughtful attention.

UTILIZATION OF FORESTS

Wise men in their day and generation, prudent and foreseeing, were the framers of the Constitution of 1894, when they excluded from the Forest Preserve — forever, as they then believed — the axe and the saw and decreed that it be "kept as wild lands." In the face of what had notoriously happened, and judging the future by the only test, the light of experience, there was nothing else for them to do but what they did. The money-changers were to be driven from the temple; conscienceless exploitation of the forests was to be checked. All this was timely and provident.

The time has come, however, when modifications of this drastic policy may safely be considered. We now know — the scientific forester of our time tells us — what was not appreciated twenty years ago, that selective cutting and removal of ripe timber is beneficial to the forests, apart from lessening the fire danger.

With a timber cut in this State five times the annual growth, and consumption sixteen times the growth, the State of New York ought to consider, seriously, a plan of classifying the Forest Preserve by areas, part to be protective and part to be productive. By confining cutting to selected trees under State supervision, and conducting all sales thereof by competitive bidding, such forest utilization would yield a direct revenue to the State treasury of $1,000,000 per annum. The fixed carrying charges on the Forest Preserve are $365,000 per annum, of which $200,000 is

for interest and $150,000 for taxes; in other words, the utilization of ripe timber would yield a net annual income of $635,000 over and above all fixed charges.

We therefore reaffirm our support for the constitutional amendment approved by the Legislature of 1913, which would permit the removal of ripe timber, as well as dead and down timber, and the leasing of camp-sites in the Forest Preserve. The latter measure, while yielding a considerable annual revenue, would tend to make the camper a vigilant fire-fighter, for he would be watching his own property as well as the State's.

The utmost care and precaution, the greatest vigilance in administration, will be required to protect such a plan of forest utilization against gross abuse. Already there are signs that certain interests not unknown to forest exploitation are willing to take an intelligent advisory part in arranging to reorganize the administration of the State's forestry interests.

A TRIPARTITE DEPARTMENT

The Conservation Commission exercises and administers under one head all the powers, duties, and functions formerly divided among several departments — the Forest, Fish and Game Commission, the State Water Supply Commission, the Forest Purchasing Board, and the Commissioners of Water Power on Black River — together with new and important additions thereto, notably along the line of perfecting " a comprehensive system for the entire State, for the conservation, development, regulation and use of the waters in each of the principal watersheds of the State." The plan of organization is that of a tripartite department, with three divisions each charged with duties relating to one of the three great phases of conservation, to lands and forests, to fish and game, or to inland waters, with three commissioners reviewing and passing upon all the great questions of policy in detail and blending them in one harmonious, progressive whole.

There are those who would return to the old days when the forests, the fish and game, and the water resources of the State were committed to separate departments, just as there are those who would return to the old days when each few miles of railroad had its separate organization and a distinct entity and was oper-

ated all by itself with slight regard to transportation as a national and world system. Or there may be those who would like the stagecoach even better, for they knew the driver long and well and he was an agreeable man, and they felt a closeness of touch, a communion of spirit, and a personal intimacy with him, not attainable by travelers in our day.

That the State of New York will ever "unscramble the eggs" or go back to conservation piecemeal — forestry here, fish and game there, water resources yonder, a course meal served at three dining-rooms — is unthinkable. These great problems of conservation are indissolubly interrelated; the forest and the waters interblend and depend the one upon the other, and the fish and game upon both.

What is needed is not a separation but a closer fusion; a completer oneness; a more thorough understanding of the finality of the union; better relations, and better directed energy upon the part of all conservationists, no matter which branch of the great movement may claim their peculiar allegiance.

One man may achieve much in administrative conservation. Three men should bring to the task a threefold intelligence, correcting each other's point of view, and minimizing the danger of error, or worse.

One man may unwittingly, through environment or from other cause, become susceptible to influences inimical to the preservation of the forest; may yield to its exploitation by private interest, against the public weal. The chance that three men can be so influenced is less than one-third as great.

One Commissioner — a single head — might once again be persuaded to stipulate away the State's right and title to its forest lands. That three Commissioners could be so persuaded is more than thrice as unlikely.

All of which is respectfully submitted.

GEORGE E. VAN KENNEN
JOHN D. MOORE
PATRICK E. McCABE
Commissioners

ALBANY, N. Y., *January* 15, 1915.

WHY COMMISSIONER McCABE DIFFERS FROM HIS COLLEAGUES

It isn't pleasant for me to differ from my colleagues in the Conservation Commission on the hydro power question, but I do not believe that any good can come out of a public situation which is encouraged in order that harmony may prevail. On the contrary, I believe that the only hope of perfecting this condition, or lifting it out of the rut in which it is, is more likely to be brought about by a broad, intelligent discussion of our differences.

There is nothing quite so baneful in unsettled public affairs as harmony, and harmony in this situation would be purchased at the price of my honest convictions, and this, I know, would not meet with the approbation of my fellow Commissioners, who are always solicitously seeking the truth in all public questions.

The time that I have been able to give to this water power question since I have taken office as Conservation Commissioner has been altogether too limited to make a thorough examination of the matter. However, it seems to me the State is entitled to know the result of my observations and reading, even though my deductions be wrong.

Of the many problems in this department the most mooted and, at the same time, the most vexatious one, and the one in which the least progress has been made, is the solution of the water power question. The literature on the subject, so far as I have been able to ascertain, consists principally of the reports of two sets of engineers who have made a sort of public shuttlecock of the question, one side contending that certain conditions were true and lugging in column after column of figures to aid or prove their contention, while the opposing forces massed as many, if not more, figures to confirm the correctness of their position, and both sides were ostensibly satisfied so long as nothing was done.

Germany and Canada seem to be much quoted as to the success and failure of governmental operation of public utilities by hydro power in these countries. It is difficult to understand the quoting of conditions in foreign countries to prove the possibilities of a situation here. There is an element of politics in all

public questions in this country which has no place in the affairs of foreign countries, and which makes it impossible for this country to compete in a commercial enterprise with private corporations. Trying to operate a commercial enterprise successfully in this country with political help is trying the impossible. Politics has its rules and provinces outside of which it cannot successfully venture; too few seem to understand this principle. A great many men would make politics of everything, and as many more would make business of everything. One can also find marshalled any number of municipalities in this country to prove and disprove the success and failure of municipal ownership.

We find in this matter, as in all matters of dispute on public questions, a difference as to what the State Constitution intends: one side invoking section 7 of article 7 of the State Constitution to prove that the State and the State only can engage in the development of this hydro-electric power; while the opposing party vigorously maintain, under this same constitutional provision, that the State may enter into the construction and maintenance of reservoirs, etc., for three specific purposes and these only: First, to regulate the flow of streams; secondly, for municipal water supply; and thirdly, for the canals of the State; that this provision of the Constitution in nowise provides for the hydro-electrical development of the water powers. So much for the constitutionality of the question.

Some persons affect to believe that the State should engage in the development and sale of this great power as a permanent business for the purpose of producing a commodity in which there would be a good commercial profit. To me it is positively incredible how any person versed in the ways of public affairs can entertain for a moment any such impracticable theory. The advocates of this speculation with whom I consulted seemed more concerned in preventing the development of our water power by rich men than they did in enriching the State or relieving the already overburdened tax payers. Many of these persons are opposed to the consummation of all public affairs and naively rest their position on their interest in and protection of the poor man's rights. So far, this side of the matter has been a sort of

political question, made so by those self-constituted representatives of the people who carry on a kind of political blackmail against those who differ from them on public questions of this character. These men are not of the best citizens, nor of the most intelligent, but they are most ingenious in their method of advertising and of ingratiating themselves as the self-sacrificing friends of those who plow and those who spin.

Many politicians, or, rather, men in public life, yield to the menacing of the supporters of this idea, more fearful of their personal safety in public office than in the soundness of the position into which they are forced. Courage is at the bottom of all big successes. No important success ever comes to one who fears failure. The merits or demerits of the water power question are never entered into as a matter of government by those persons; the logic or philosophy of the events surrounding the situation are in nowise considered.

However, I, myself, do not believe that this is a question which engineers can settle. At the outset they were necessary to prove the volume of water and its generative power, but that has been determined over and over again. This was the first step and no second step has ever been taken. The question has been, as it were, marking time.

In public matters delay has its full quota of contributory causes; namely, weakness in men, lack of decision and confidence, fear of responsibility, inefficiency, procrastination, want of capacity, poor in courage and the thousand-and-one other apprehensions which beset the way of the wrong man. Protracted delay is the greatest of all evils. In my judgment, a procrastinating administration is worse and more expensive than a vitiated administration. The restraints of some administrations are as bad as the extravagances of others. Consequently, the delay attending this power question is the most pernicious wrong possible to the State. So, also, should a policy of devolution be avoided at this time.

It is high time that another step was taken toward the solution of this question, and no other step can or will be taken without courage — a courage that rises above the fear of the poor man's political support, the vagaries of which mean nothing, as well as

above the hope of the rich man's favor, which is as barren as the favor of princes.

If this problem is to be properly adjusted the underbrush must be first cleared away; all this prating about the poor man must be eliminated; and the cant and hypocricy of the self-elected guardians of the people must be expelled from the subject, as well as the influence of the politician who curries favor at any price.

Honest or just legislation is for the whole people, rich and poor alike. There is no benefit in such things for one man over another, and to induce persons to lend themselves to any public movement, with the promise and expectancy of bettering their condition, particularly if they are poor, is deception of the very worst type.

But I do not believe the poor man is so easily fooled as the professional ranter thinks. For years I have been listening to the lamentations of the professional supporters and defenders of the poor man, asking and receiving legislation in his behalf; and year after year the poor man's condition is no better. Some poor men rise to affluence in spite of their poverty, while other poor men fail terribly notwithstanding rare mental attainments.

There is a something at work in each man's life which has more to do with shaping his course and fixing his position in the world than the operation of officials at the Capitol. Petty agitators still indulge in the fallacious idea of being able to trick the people into believing they can get something for nothing.

No progress has been made in the graduation of this question because of the misapplied rules and wrong principles engaged. It is my opinion that it is a misunderstanding of the logic of the commercial situation surrounding this question which is responsible for a great deal of the tinkering which has been going on for the last several years. Because the State owns the water is no reason why Tom, Dick and Harry should be allowed to experiment at the cost of the people, or why it should engage in the business of hydro development — not at all. There are some things the State can do, such as approximating values of estates — real and personal — levying and collecting taxes and disbursing the cost of operation, etc.; and there are also some things the State cannot do, and one of them is to engage successfully in a commercial enterprise. It is too true that a question in astronomy cannot be settled by applying the laws of philosophy.

This is a big question and must, of necessity, be settled by big men whose business it is to commercialize water power. Little men cannot settle it at all, nor can a man big in other ways settle it. The average man will read nothing which interferes with his prejudices. This hydro question must be settled by a man of genius; one who loves his work; a man who can bring to his assistance the support and confidence of the wealth necessary to consummate the undertaking. They of little faith are impregnate with doubt and fear, which is always a hindrance; and he who assumes to fulfill a contract for the government which requires vigor and skill must expect the denunciation of those of little heart — and they are legion. Self-reliance, courage, decision and brains are the qualities necessary for a bold project. Men with these elements cannot work tied with the red tape preventives thought necessary to protect the State in its public exploitations. To appoint one in the public service to a position of grave responsibility is not difficult, nor is it regarded as a hardship to accept the appointment and collect the salary; but to render services in keeping with the responsibility of an important office and proportionate to a good salary is not at all common.

This is a business question pure and simple, and must, if settled right, be settled by the rules of business. Think of having something to sell; you won't sell it to a rich man and a poor man can't buy it. The result is you must keep it — which is the case in this affair. If the price of the water power of the State could be brought within the reach of a poor man, every poor man in the State would claim and want it. It is for this reason, and upon this principle, that franchises are given to the highest, not the lowest, bidder.

When the State receives all a privilege is worth, everyone in the State is more or less benefited; whereas, if the same benefit is conferred upon one for the smallest possible pittance, everyone in the State is more or less wronged.

I am unalterably opposed to the State contributing to the support of any man's business at the expense of the citizenship of New York. The theory of State ownership is alien to our form of government — there is no doubt about this. It is a method wherein the State moneys of all the people are ventured in hopes that about one-quarter of the people may profit. The State has something to sell, certain water powers which are said to be of great value, and in the disposing of these rights it must proceed along the simple lines which business follows in all such matters;

it must offer them for sale in the market where such privileges are sold and brought under such laws and regulations which may be necessary to protect the State from a purchaser who may be inclined to deceive or wrong the State for himself. Ability for the construction and organization necessary to make a project of this magnitude a success is given to few men, and entrusting those outside of the limited circle with the disentangling of the complex elements of this plan is not the part of either sense or wisdom.

The great danger the future holds for the State, if some action is not taken now, is the refusal of the proper interests to enter into the scheme. Such things cannot be deferred too long without loss to those who hold a marketable affair until the anxious become indifferent and the wealth necessary for the project seeks an investment in quarters more tranquil and not froth with the instability which surrounds the public contracts and franchises of today.

Whether the water privileges are as desirable now as they were several years ago I do not know. Experimenting may have proved otherwise. However, I believe if certain persons can be induced to enter this field of enterprise success will attend their endeavors, out of which the State will profit greatly. The State will be as much concerned in the success of the undertaking as those who make possible the scheme. The greater the success the greater the value of the State water rights and the greater the profits accruing to the taxpayers; where failure to the enterprise means valueless water rights to the State.

It would seem an easy matter to draft a bill calling for the highest or greatest development of all the water power of the State in which the regulations surrounding and protecting the rights of the people should be drawn with an eye for a commensurate return to the State, in keeping with the power generated out of the waters of the State. To obtain the full commercial value of the privilege bestowed will prove the most important, as well as the most difficult, part of the transaction and, of necessity, must be adjusted by men who are seeking no political favors nor building for a public future. So, also, must the men entrusted to represent the State in these negotiations stand away outside of the influence of the corporations concerned.

I believe a measure can be drafted protecting to the fullest every interest of the State and, at the same time, not to embarrass the contractor with fear and trepidation sufficient to paralyze his best

efforts. Success for one is success for both, while failure for one is failure for both. Let another step be taken. Allow the criminal waste of the valuable water power of the State to go no further. Nothing has been done, no progress has been made and no move forward can be made along the old lines — if it could have been it would have been.

The reports on this subject, after the first ones on both sides, seem very much like the rethreshing of old straw.

PATRICK E. McCABE
Conservation Commissioner

REPORT OF CONSERVATION BUREAU, ATTORNEY-GENERAL'S OFFICE, RELATIVE TO LITIGATIONS

Pursuant to the provisions of section 9 of chapter 647 of the Laws of 1911, the Conservation Commission transmitted to the Attorney-General all orders to bring actions, suits and proceedings which the Commission was authorized to institute and maintain, and requested the Attorney-General to defend them.

At the beginning of the year 1914 there were pending eighty-seven actions, the majority of which involved title to lands in the Forest Preserve of the State of New York. These were actions transferred to the Conservation Bureau of the Attorney-General's office from the Legal Department of the former Forest, Fish and Game Commission and were awaiting trial. During the year 1914 all pending actions involving title were disposed of by trial, and of these, fifty-five were tried before Hon. Irving G. Vann as official referee.

These fifty-five actions involved title to lands in Township 15, Totten and Crossfield's Purchase, Hamilton county, the majority of which were brought in 1907. The lands involved were purchased by the State from the Indian River Company and subsequently it appeared that at the time of purchase there were many occupants of these lands claiming adversely to the Indian River Company and its grantee, the State. The rights of the respective parties were determined upon the trial of these cases and where the State failed in title, the Indian River Company, under the terms of its deed, will be obliged to reimburse the State.

During the past year four actions, brought in 1910 against the Santa Clara Lumber Company and George N. Ostrander and others, were argued in the Court of Appeals, and that court rendered its decision in an important action involving a question of title and the right of the Forest, Fish and Game Commissioner to enter into a stipulation permitting judgment to be taken against the State, thereby adjudicating the defendants to be the owners of the land in dispute. While the State had been unsuccessful in the lower courts, the Court of Appeals by unanimous decision reversed the judgment and directed a new trial of this action.

The determination of the vital question, namely the power of the Forest, Fish and Game Commissioner to stipulate that judgment could be taken against the State adjudicating the defendant as the owner of lands within the Forest Preserve, necessarily and materially affects a number of similar cases where the same question is involved. The decision does not go to the good faith of the transaction but rests entirely upon the lack of power conferred upon the Commissioner, particularly in view of the constitutional prohibition of alienation of State lands within the Forest Preserve. The land involved in the action which has been sent back for a new trial consists of about 2,100 acres lying north of Township 50, in Hamilton and Essex counties, and upon which land the soft wood timber had been removed. Should it be finally determined that the State owned the land at the time the judgment was permitted to be taken, the defendants will be required to pay the damages incurred by the taking of the same.

Following the decision just referred to, Justice Borst has rendered a decision involving a similar transaction with the Forest, Fish and Game Commissioner and the Raquette Falls Land Company. The lands in question are located in Township 12, Old Military Tract, Essex county, and comprise about 1,000 acres of land which is substantially virgin forest, and upon which the defendant has commenced lumbering operations, under the terms of an agreement which has been, by the decision of Justice Borst, determined not to be within the power of the Commissioner to make.

Two judgments against the New York Central and Hudson River Railroad Company, one in Herkimer county and the other in Franklin county, were reversed in the Court of Appeals and new trial ordered. These actions were for damages to State lands, caused by fire alleged to have been set by the railroad company in 1908.

During the year 1914 the Conservation Bureau of the Attorney-General's office has disposed of one hundred and nine cases. Of these, sixty-five involved titles to lands in the Forest Preserve of the State of New York; eleven actions for trespass, and twenty-five actions for violations of the fish and game provisions of the statute have been prosecuted.

The Commission directed an investigation of the legal status of the occupants of state lands in Township 40, (Raquette Lake), Totten and Crossfield's Purchase. There are located in this township about seventy occupants who appear to have no title to the lands which they occupy. Surveys have been made, records completed and data obtained upon which proceedings may be brought to recover possession of these lands.

There have been disposed of by action since January 1, 1914, the following cases:

Trespass	11
Fish and game	25
Fire	6
Title	65
Vacate judgment	1
False arrest	1

Of the cases pending and commenced during the year 1914, there are still pending:

Trespass	9
Fish and game	10
False arrest	3
Vacate judgment	1
Waste	1
Title	21

Of the ninety-two orders on hand January 1, 1914 for prosecution for violation of the Conservation Law, action has been taken as follows:

Closed before commencing action	22
Action commenced:	
pending	25
closed	27
Orders held awaiting data, surveys, etc	18

On the one hundred and fifty-five orders to prosecute received since January 1, 1914, action has been taken as follows:

Action commenced			74
	Closed.	Pending.	
Fish and game	9	5	
Trespass	6	3	
Title	39	8	
Set aside conveyance	...	1	
Fire	1	...	
Partition	...	1	
Public Service rule violation	...	1	
	55	19	
Orders closed before action was started			6
Orders held awaiting data, etc.:			
Fish and game			2
Trespass			4
Title			59
Fire			1
Recovered moneys			1
Set aside conveyance			1
Execute judgment			1
Public Service Rule violation			4
Top-lopping			1
Recovery of rents and taxes on oyster bed leases			1

MONEYS RECOVERED THROUGH ACTIONS BROUGHT BY THE CONSERVATION BUREAU, ATTORNEY-GENERAL'S OFFICE

1914.		F. & G.	Trespass.	Fire.
Jan.	Maurice E. Rogalin	$20 00	.....	.....
Feb.	George M. Hallock	12 50	.....	.....
	George A. Owen	15 00	.....	.....
	Wm. McLaughlin	10 00	.....	.....
	Charles H. Cooper	12 50	.....	.....
	J. B. Lunney	15 00	.....	.....
March.	S. Guggenheim	85 00	.....	.....
	Ai. W. Shaw	.....	$10 00	.....
April	Truman Rice (judg.)	25 00	.....	.....
May.	H. Duncan Wood	25 00	.....	.....
	Visher Whipple	50 00	.....	.....
June.	N. Y. C. R. R. Co. (costs)	.....	.....	$10 00
	Albert Premo	.....	.....	10 00
July.	Purity Blue Point O. Co	72 00	.....	.....
	Azel F. Merrill	1,276 00	.....	.....
	Merrill & Bayles	49 20	.....	.....
	John J. Ferry	36 15	.....	.....
	Glenwood Oyster Co	51 15	.....	.....
	Cleveland DuBois	.....	125 00	.....
Aug.	Philip V. Monk	.....	100 00	.....
Sept.	Andrew Sullivan	.....	50 00	.....
	Edgar Call (costs)	35 00	.....	.....
	Wm. F. Cochrane	75 00	.....	.....
Oct.	Charles Goetz (exec.)	117 11	.....	.....
	Albert Frasier	51 00	.....	.....
	George Eddy	15 00	.....	.....
	Joseph Hilderbrandt	20 00	.....	.....
	Frank Sherman	.....	84 97	.....
	Norman Arnold	.....	.....	50 00
	Erie R. R. Co	.....	.....	1,566 67
	N. Y. Telephone Co	.....	10 00	.....
	Joseph Burns	115 00	.....	.....
	Myron Daley (exec.)	.....	13 18	.....
Nov.	Bert Wright	20 00	.....	.....
	Archie Bryden	.....	.....	15 00
Dec.	Long Island R. R. Co. (judg.)	.....	.....	586 16
	John P. Brannen (judg.)	.....	25 00	.....

FINANCIAL STATEMENT OF CONSERVATION COMMISSION

SUMMARY OF RECEIPTS AND DISBURSEMENTS, EXCLUSIVE OF REGULAR ACCOUNTS WITH THE STATE COMPTROLLER, FOR FISCAL YEAR ENDING SEPTEMBER 30, 1914.

Total collections		$381,116 86
Fines and penalties	$67,740 39	
Net license	14,964 46	
Breeders' license	525 00	
Hunting license	208,250 00	
Possession of game license	485 25	
Tax and rental on shellfish lands	33,231 95	
Importation, foreign game	6,577 60	
Tagging trout	7,156 00	
Shipping into State license	20 00	
Cuba Reservoir rental	2,141 20	
Trespass on State lands	5,350 99	
Sale of trees	7,988 54	
Fire rebate	24,816 92	
Telephone rentals	106 40	
Refund on payrolls	54 16	
Fire fines	529 70	
Miscellaneous	1,178 30	
		$381,116 86

DISBURSEMENTS

By cash to State Treasurer	$380,407 26	
By refunds and cost of collection	709 60	
		$381,116 86

SUMMARY OF EXPENDITURES FOR FISCAL YEAR ENDING SEPTEMBER 30, 1914, BY DIVISIONS

General Office

Advertising and printing, in connection with public hearings	288 97	
Office expenses	22,883 57	
Traveling expenses	7,684 84	
Bureau of publication, expenses	981 75	
Official salaries	75,622 07	
Graded salaries	20,455 80	
Additional and temporary employees	3,070 00	
		$130,987 00

Division of Fish and Game

Expenses, steamboats and launches	$1,269 64	
Fines and penalties, court, attorney and witness costs	10,694 88	

Protectors and Division Chiefs' expenses	$59,458 18	
Protectors' expenses, special	5,328 58	
Fish and Game official salaries	5,400 00	
Fish and Game graded employees	123,966 12	
Superintendent of inland fisheries, salary	2,500 00	
Marine Bureau, expenses	5,000 00	
Surveying shellfish lands	482 16	
Marine Bureau:		
official salaries	11,807 26	
graded employees	1,034 48	
Fish hatcheries:		
maintenance	47,765 48	
repairs	2,347 83	
Collecting fish eggs	315 41	
Fish hatcheries:		
official salaries	4,000 00	
graded employees	9,180 00	
Fish hatchery, Warren county, examination of title	111 16	
Fish hatchery, St. Lawrence county, purchase and construction	2,036 26	
Game bird farm:		
maintenance	5,754 02	
official salaries	1,500 00	
Hunters' License Bureau:		
expenses	3,895 94	
printing licenses	1,500 00	
county clerks' fees	4,014 32	
graded employees	1,500 00	
Tagging machines and tags, purchase of	1,091 21	
Printing game laws	839 68	
		$312,792 61

Division of Lands and Forests

Forest Preserve, land purchase and expenses	$7,780 00	
Purchase of land	3,419 75	
Protecting State's title to lands (surveying)	4,037 09	
Lands and Forests, expenses of forestry bureau	5,354 64	
Reforesting	19,973 46	
Fire patrol	93,699 36	
St. Lawrence Reservation:		
maintenance	155 22	
lands and docks, purchase	1,500 00	
Cuba reservoir, surveying and caretaking	1,346 68	
Lands and Forests:		
official salaries	11,408 32	
graded employees	26,417 29	
		175,091 81

Division of Inland Waters

Hydrographic investigations	$9,467 67	
Surveys, investigations and river improvement	19,179 87	

Investigating river structures, dams, etc. (Section 22)	$2,311 73	
State dam, fourth lake, repairs	1,644 76	
Division of Inland Waters:		
official salaries	9,000 00	
graded employees	15,798 78	
Gate tenders' salaries, Old Forge and Beaver river	1,100 00	
		$58,502 81
		$677,374 23
Deduct amounts paid from Chapter 833, Laws of 1913, covering accounts incurred prior to October 1, 1913		36,994 20
Actual expenditures for fiscal year ended Sept. 30, 1914		$640,380 03

ANNUAL REPORT

OF THE

DIVISION OF LANDS AND FORESTS

1914

FOURTH ANNUAL REPORT

OF THE

CONSERVATION COMMISSION

DIVISION OF LANDS AND FORESTS

To the Conservation Commission:

Herewith I transmit to you, pursuant to law, the Annual Report of the Division of Lands and Forests for the fiscal year ending September 30, 1914

Respectfully yours,
JAMES J. FOX
Deputy Commissioner

December 31, 1914.

ANNUAL REPORT

OF THE

FORESTRY BUREAU

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Photo by Reury

David C. Wood — Born Jan. 26, 1852; Died Sept. 17, 1914 — Late Chief Land Surveyor

REPORT OF THE FORESTRY BUREAU

Hon. James J. Fox, *Deputy Commissioner, Conservation Commission, Albany, N. Y.:*

Sir.— I transmit herein a report of the affairs of the Forestry Bureau for the year 1914. Our activities fall into several natural but separate lines, each of which will be separately treated.

THE FOREST PRESERVE

This great area aggregating more than one and three-fourths million acres is maintained as a protective and pleasure forest. As has often been stated, the provisions of the constitution prohibit any direct use of this vast property. Our efforts in connection with its administration are of a protective nature. We have given diligent attention to prevent trespass and have greatly reduced the damage from this source. Surveys have relocated many miles of the property lines. The rangers have made an excellent showing in protecting this area from fire. We have also been engaged in making an estimate of the resource of this domain.

Trespass

It is a pleasure to note that, although the entire Preserve has been carefully patrolled, there have been but few and small trespasses discovered. We have reached a degree of protection never before attained. A compilation of the trespass reports received at this office shows that the total value of material cut upon the Forest Preserve during the year was but $157.42. This is an encouraging mark of progress when we note than only a few years ago the value of timber taken aggregated tens of thousands of dollars per annum. There may be a few cases which will yet be discovered to have occurred during the year but they will be few and small. It is certain that trespasses as such have ceased.

An analysis of the fourteen cases reported indicates that but two had the appearance of an attempt to steal timber. One was for removal of dead material, while the remainder were through carelessness or indistinctness of boundary lines, or disputed title. A particular effort has been made to prevent trespass. Numerous investigations to determine location of lines and other important facts were made before cutting of timber on adjacent lands began. It is fair to say that we find a better public sentiment, and a general opinion against trespass. We have enjoyed co-operation of land owners and others in an effort to determine boundaries before lumbering and an acceptance of survey lines.

SURVEYS

Our appropriations have not permitted us to adopt a comprehensive plan of forest land survey. Such a policy is necessary, and would be economy. In former reports emphasis has been placed upon the value of locating the boundaries of the Preserve, and the further fact that delay means increased cost because the old monuments are rapidly decaying. We have used our small appropriation for surveys which were urgent.

During the year we have surveyed approximately one hundred and fifty miles of lines, nearly all of which were required in connection with pending or prospective litigation. These surveys have been carefully checked and lines well monumented were determined. These surveys will be of permanent value, and will become a part of our general survey.

The field notes and maps of all recent surveys have been carefully filed, indexed and made a matter of record. We have also added to our collection of old maps and survey notes. This information has been collected, not only from the official records at Albany but from many unexpected sources. We are gradually developing a complete history of the numerous land grants and patents, together with records as to the surveys thereof. The work is slow and tedious. It can be done only when other work will permit or as sheer necessity demands. The plan is to work out the data so as to make it available for the future as well as the present.

I regret to say that during the year we have, on account of the

death of David C. Wood, lost the valued services of our Chief Land Surveyor. Mr. Wood was, for nearly forty years, engaged in surveying Adirondack lands. He was, during his earlier years, employed by private land owners, but for nearly twenty years had devoted the major portion of his time to the State. His death, which occurred at his home in Herkimer, N. Y., September 17th, leaves a place impossible to fill. During those long years of hard work he acquired an extended knowledge of land grants, history of surveys, and methods of old surveyors; a knowledge of where thousands of monuments were located and ability to find them, and a perseverance in relocating old lines which created a high standard of work. These facts, coupled with energy, common sense and absolute honesty won for him an enviable reputation as a surveyor. It was his pride to find the " old blazes " and prove fully the correctness of his work. He has long been recognized as the best authority on location of forest land lines in this region.

The monuments which he has left inscribed on trees and posts will long remain in the forests where he devoted most of his life. His work is an inspiration to others as it indicates how success can be achieved through industry and honesty. His memory will be cherished by his associates, and his valued services greatly missed.

TITLES

The fact that various portions of the Forest Preserve have been acquired by several thousand different chains of title gives a general idea of the extensive task involved in completing these records. Approximately one half of the State's titles were derived from tax sales. In such cases a new chain of title begins. We are endeavoring to get a complete set of tax searches and all other facts in connection with such titles. In case land was purchased an " abstract " was furnished when the sale was made. These papers are all being carefully indexed and made useful.

LITIGATION

During the year many important questions affecting land titles have been carefully considered. In 1897 the State purchased

40,000 acres of land from the Indian River Company, situated in Townships 15 and 32, Totten & Crossfield's Purchase, Hamilton and Essex Counties. At the time of the purchase there was a portion of the land under contract and many families in use and occupation of some of the lands. There was at the time of the sale a question as to what lands would pass to the State, and there was inserted in the deed a covenant that there would be a refund of purchase price and taxes upon all lands where the State failed to acquire title. The occupancies continued and the question of title, although embarrassing, persisted from year to year and from administration to administration. We decided that the equity of the matter must be determined and an adjudication of the title secured. Accordingly, a complete survey of the lands was made, a description of the occupied land secured, complaints drawn and served. Hon. Irving G. Vann, former judge of the Court of Appeals, as Official Referee held court at Indian Lake and practically all the cases have been heard. The judgments have been entered in one half the cases and the remainder are awaiting the findings. As a result it has been so far determined that the State did not acquire title to 1,847.41 acres in this tract. This does not mean a loss of land but does mean that the State never acquired title to this area which it paid for and is now in position to recover the purchase price.

Actions to determine title to various parcels of land were fully prosecuted. The State's title to several of these properties was based on tax sales. The tax titles were fatally defective, and the court decided that the State never acquired title. These lands were as follows:

	Acres
Iron Ore Tract, Lots 218 and 221 parts	95.30
Oxbow Tract, Lot 123	155.00
Hardenburgh Patent, Gt. Lot 2, Div. 28, Lot 3 part	76.50
Hardenburgh Patent, Gt. Lot 35, Div. 14, Lot 8 part	45.00
Hardenburgh Patent, Gt. Lot 39, Morgan Lewis Tract, Lot 85	115.00
	486.80

SUMMARY OF REDUCTIONS IN LAND LIST

	Acres
Tax titles declared void	486.80
Lands now owned by the State	215.00
Corrections in acreage	1,882.66
Errors in footings	200.00
Mortgage lands not Forest Preserve	100.00
Lands not acquired	99.00
Total	4,832.87

The result is that through investigation and court decisions, we ascertained that the State never had title to 4,832.87 acres which have been carried on our lists.

We have co-operated with the Attorney-General in carrying to a successful conclusion an action against the Santa Clara Lumber Company and others in which we maintained that no officer had the authority to compromise questions of State's title to a portion of the Forest Preserve. In this case the Court of Appeals has given a decision which sets aside all such former agreements or stipulations, and we are now in a position to go before the courts and have such questions determined upon the facts and law.

LANDS ADDED

		Acres
1	Purchase	1,711
2	Parcels omitted 1914 list	18.98
3	Nobleboro Gore	937
	Total additions	2,666.98

The purchases include 131 acres in Lot 232, Paradox Tract, Essex county, and a parcel of 1,580 acres being all or parts of Lots 51, 52, 53 and 62, State Land Tract in Greene county.

Nobleboro Gore is a parcel bounded north by Moose River Tract, east by Arthurboro Patent, south by Nobleboro Patent, and west by Adgate's Eastern Tract, containing 939 acres. A careful search of the grants, surveys, etc., have been made, and we conclude it is State property under " Original Ownership."

SUMMARY

		Acres
Adirondack Preserve (January 1, 1914)		1,713,697.06
Reduction	4,282.37	
Increase	1,086.98	
		3,195.39
Adirondack Preserve (January 1, 1915)		1,710,501.67
Catskill Preserve (January 1, 1914)		112,185.65
Reduction	550.50	
Increase	1,580.00	
		1,029.50
Catskill Preserve (January 1, 1915)		113,215.15

TOTAL

Adirondack Preserve	1,710,501.67
Catskill Preserve	113,215.15
Total Forest Preserve	1,823,716.82

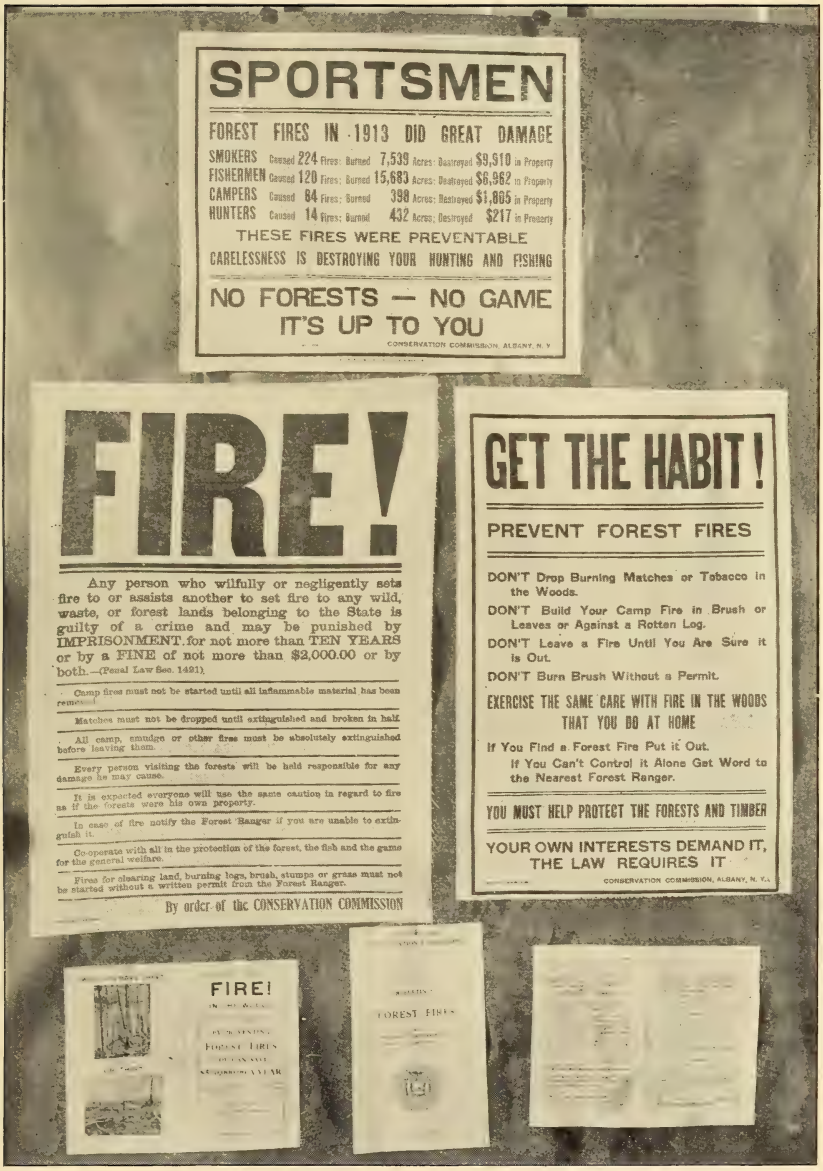
SUMMARY OF AREA

	Acres
Area Forest Preserve January 1, 1914	1,825,882.71
Lands lost 1914 (see above)	4,889.87
	1,820,992.84
Lands added 1914 (See above)	2,666.98
Area Forest Preserve January 1, 1915	1,823,659.82

RESOURCES

We have made general statements* as to the stand of timber, the annual growth, and possible income that the State might derive if the Constitution permitted conservative lumbering of the Forest Preserve. Such statements were based upon examination of various parcels together with facts secured from many practical men familiar with the region. It was an estimate, but was the best information we could secure. In order to get more accurate

*See Third Annual Report.



Forest Fire Warnings Issued by Conservation Commission

figures, we directed our rangers to examine and report upon each parcel in their territory. The information sought comprehended a history of past operations upon the lands, fires, soil, timber (kind, quantity and value) and camp sites (quantity and value). The field work is practically completed, but there is a large amount of work to be done by a competent forester before the facts will be in shape to report fully. We hope to give an approximate statement of the kind, quantity and value of the timber and also where it is located. We hope to submit facts as to camp sites and opinions as to their rental values.

This information will be of value to the Legislature and the Constitutional Convention, and it will form a separate report to be found in the appendix. I do not mean that this report offers a basis for lumbering operations, but rather, that it is an attempt to get an approximate estimate of the timber upon State lands.

The Cornell Forest School, as a part of its field work, made an examination of a large area of State land in the Catskill Forest Preserve. Professor Recknagel has kindly incorporated the results of this work into a report which will be found appended to this report. His report is based upon a careful examination of the tract (the method fully explained therein) and gives concisely the best kind of information as to quantity of timber, location, etc.

All who are interested should examine it carefully. If the Forest Preserve is to be lumbered and handled intelligently, examinations of this character must be made before any plans can be determined.

The question of leasing camp sites ought to be carefully considered. There seems to be a multitude of opinions as to area, restrictions, length of lease, amount of rental, and other factors. The problems here presented require careful thought and the outlining of a thorough policy before entering upon the subject.

FOREST FIRE PROTECTION

The year 1914 has seen a marked decrease over 1913 in the number and extent of fires occuring in the forest regions of the State. Lack of funds has prevented the carrying out of many projects which would have resulted in more complete protection.

PREVENTIVE MEASURES

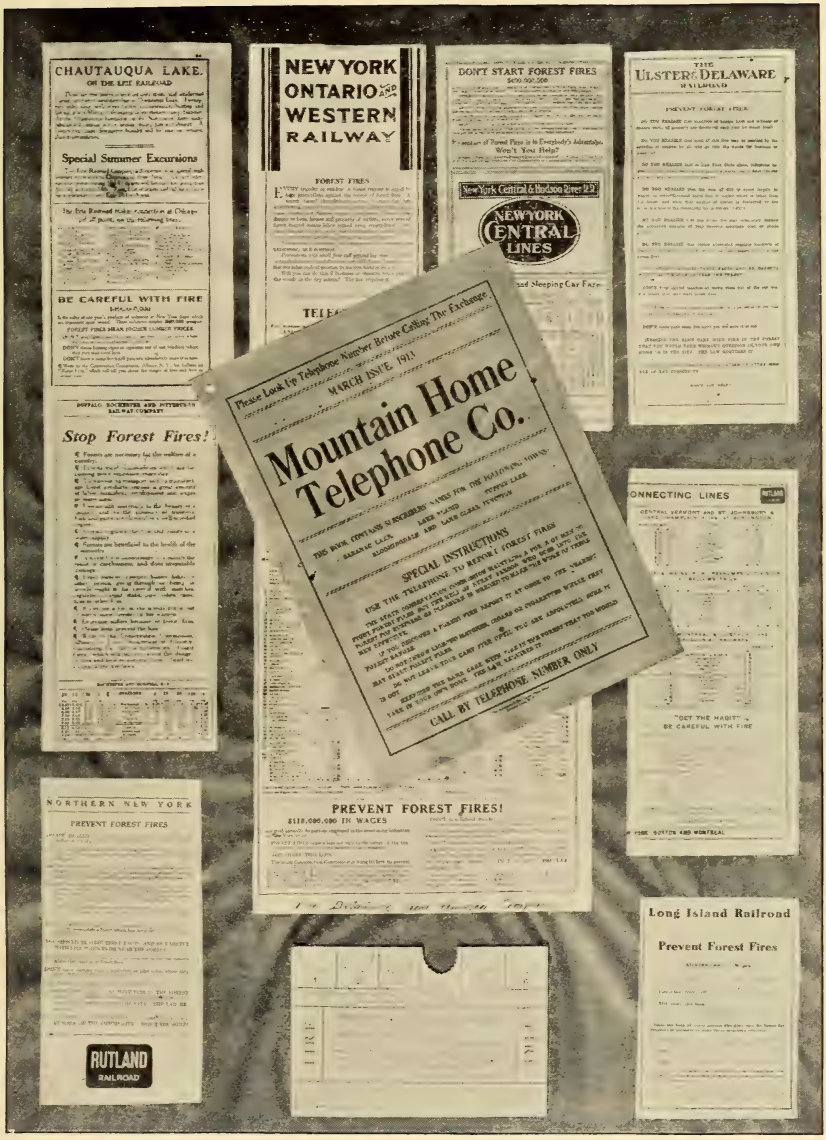
The fact that ninety-four of the fires of the year were due to avoidable carelessness indicates the need of education. The Department has continued publishing fire notices and posting them at conspicuous places in the forest. The design of such posters was varied with each issue, the belief being that new ideas attract attention, and, therefore, make the posters more effective.

A series of fire warnings, printed on red paper, were inserted in the "Game Law" booklet, and also in the synopsis of the law. Those pamphlets go to each of the two hundred thousand purchasers of hunting licenses. The warning was an attempt to appeal to the sportsmen to prevent fires. Their attention was called to the fires they caused and the resulting damage, and they were reminded that continued fires reduce the supply of fish and game.

Telephone and railroad companies continued their co-operation by publishing fire warnings in their advertising literature and time table folders. The subject-matter is changed each year and thus a wider field is covered.

It is a conservative estimate to say that two million persons were reached by those fire warnings through one or another of the several agencies. Inquiries are received every day at this office asking for information about forest fires. In order to answer such communications Bulletin No. 10, "Forest Fires," was issued during the year and has admirably filled the need. These requests indicate a growing popular appreciation of the importance of the problem.

This educational work is a fire preventive measure aimed at all agencies responsible for fires. The method is varied for the purpose of making an appeal to the many interests of the people whom it is necessary to reach. In order to plan such work it is necessary to study the causes of fires. The following table shows the total number of reported fires, which occurred in the "fire towns" of the Adirondacks and Catskills, classified by causes:



Forest Fire Warnings in Literature Issued by Railroad and Telephone Companies

Cause of Forest Fires, 1914

Smokers	113
Fishermen	57
Railroads	50
Hunters	42
Campers	29
Incendiary	29
Lightning	26
Berry pickers	21
Clearing land	20
Burning buildings	12
Bee hunters	4
Children	2
River drivers	2
Lumberjacks	2
Ginseng diggers	1
Gum pickers	1
Sawmill	1
Traction engine	1
Total	413

An examination of the table shows that 113 of the 413 fires, or 27 per cent. of the total, were caused by carelessness of smokers. This shows an improvement over 1913 when 224 fires, or 33 per cent. of the total, were due to this cause. We think the decrease is due to the educational work. The record, however, is a serious reflection upon the careless smoker. If a person goes into the woods he does so for either pleasure or business; in either case he should be sufficiently interested to prevent forest fires.

Fishermen caused 14 per cent. of the total fires this year as against 17 per cent. last season. This reduction also indicates better precaution, but still, there is opportunity for vast improvement.

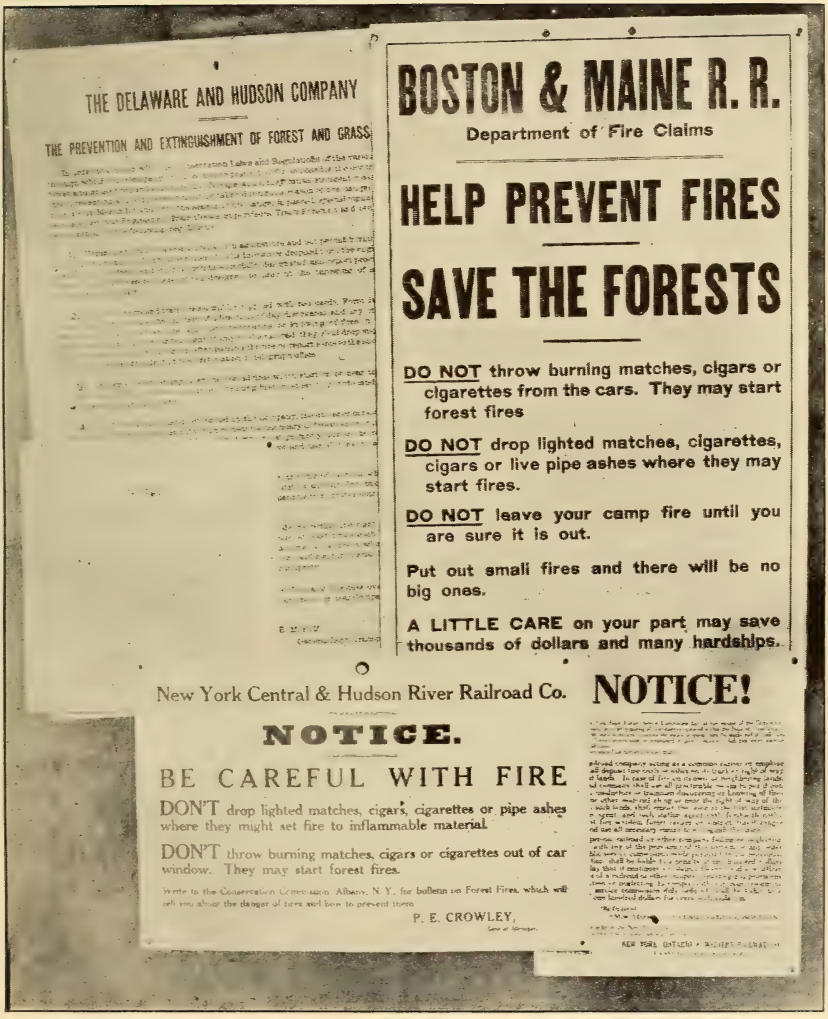
Hunters were responsible for 10 per cent. of the fires of the year as against 2 per cent. in 1913. This increase is largely due to difference in weather conditions, because it was wet and almost

no fires occurred during the hunting season of 1913, while it was very dangerous this year. The fact is clear that those who use the woods must exercise greater care or there will necessarily be some drastic action by property owners, which will curtail the privileges now enjoyed by hunters and others on lands which they do not own.

If we combine the fires caused by the fishermen, hunters and campers, we find that they constitute 41 per cent. of all the fires. These figures do not include any smokers' fires, a proportion of which were caused by these sportsmen. If we charge a reasonable proportion of the smokers' fires to these people, we conclude that sportsmen were the cause of 50 per cent. of the total number of fires. A computation on this basis shows that these agencies burned 44 per cent. of the area and caused 57 per cent. of the total loss. This is a severe arraignment of the sportsmen of the State, but it seems to be true. As a class, they have unanimously agreed upon the policy of forest protection, but such a policy to succeed must have the individual assistance of the users of the woods. Forest fires mean destruction not only of the tree growth, but of the cover which is the home of their game and the regulator of their water supply, which means so much to fish life. Destroy the forests, and extinction of fish and game follows.

It is a pleasure to note the rapid progress made in reduction of railroad fires. The railroad fires were but 12 per cent. of the total and of these only two exceeded ten acres in extent. This result has been brought about by removing the cause. The "rights of way" have been cleared and a large proportion of the engines have been so equipped that sparks are less liable to escape. The results have been made possible only by the hearty co-operation of the railroad officials having these matters in charge.

Our force of inspectors has been active; and as a result, 6,995 miles or 84 per cent. of the entire "rights of way" of the sixty railroads have been inspected, and 6,300 of the 6,866 locomotives operating, or 92 per cent., have been examined, besides 782 reinspections made. A marked improvement on nearly all railroad lines has been found. As a matter of comparison, in one district in 1913 out of a total of 1,000 engines 40 per cent. were found defective on first inspection, while in 1914 only 17 per cent.



Forest Fire Placards Issued by Railroads

failed to conform to specification on similar inspection. There are, however, a few cases where the operators have failed to comply with the law and these cases have been submitted to the Attorney-General with instructions to prosecute.

The New York Central and Hudson River Railroad Company filed with the Public Service Commission March 12, 1914, a petition requesting to be relieved from an order of that Commission dated April 1, 1909, which required them to use oil as fuel in locomotives on day trains upon their Adirondack lines during the fire season. The petition recited that since the 1909 order was issued there had been a decided increase in the cost of fuel oil, making the present cost of oil over coal about $90,000 per season; that an improved type of "superheater" locomotive had been designed and tested by the company, which they alleged to be absolutely safe as to escape of sparks, coals and cinders.

The Public Service Commission held several hearings and the Conservation Commission opposed any modification of the 1909 order. We were greatly assisted by the Association for the Protection of the Adirondacks as well as by representatives of the Empire State Forest Products Association, the International Paper Company and several other land owners. We contended:

1. The use of oil burners eliminated all forest fires resulting from sparks, coals or cinders from locomotives.

2. That no matter how effective the design or equipment of a locomotive may be, there is still remaining the question of maintenance and operation.

3. That past experience shows the disastrous results of such fires, and that the interests endangered are too great to permit any chance of fires.

The Public Service Commission by decision dated May 21, 1914, sustained our objections and denied the application. Their conclusions were:

"1. The preservation of the State's forests from fire and destruction transcends in importance all questions of expediency, convenience, or economy, and demands the adoption and enforcement of every possible protective and preventive measure.

"2. The question as to what fuel may be used for steam generation in locomotives operated in the Forest Preserve is simply

one of safety. If coal burners are surely safe, they should be allowed, if unsafe, they should be disallowed and in either case without regard to the question of expense — at least while that question falls within the limits of the present alleged difference in operation cost between the two methods.

"3. The only sure way to safeguard against forest fires is to prevent setting fires in or near to forest lands; and since neither sparks nor coals are produced by the burning of oil, which is a fluid and leaves no ash that can be identified in the oil burning locomotive we have an absolutely effective means of preventing railroad fires from locomotive operation; whereas live coals and sparks are bound to appear in the combustion of coal under forced draft, and accordingly in the coal burning type of locomotive we have safety only to the extent that the escape of sparks and the dropping of live coals can be prevented.

"4. While substantial progress has been made in the development of a coal burning type of locomotive which will not throw sparks nor drop live coals, it has not yet been demonstrated that in the continuous operation of these devices the danger risk will be reduced to that minimum which under existing conditions in the Forest Preserve must properly remain as the standard for regulative guidance in railroad operation."

Fires to clear land or fallow fires were once one of the agencies which caused a large proportion of our fires. These fires are now regulated. A permit must be obtained before such fires can be legally set. The result is that it is the exception when they cause a forest fire, and if they do so they are illegally set. These fires amounted to but 20 in number, or 5 per cent. of the total, and only one did appreciable damage. The results obtained in this case suggest a solution of campers' and other fires, if such preventive methods become necessary.

We have, when necessity required, and when in our judgment public safety would be amply guarded, appointed as special forest ranger without pay, one or more reliable employees of a firm which had a large amount of burning. This person had to be there during the burning, had authority to issue permits and make reports to us, thus saving the expense of detailing a ranger. The result has been satisfactory.

The following table contains a summary of violations of section 97 and section 98 (fire provisions) of the Conservation Law. The total of such cases is but two-thirds as great as for 1913.

Violations of Fire Law

SECTION OF LAW	Total number of cases	Cases dropped	Cases pending	Cases settled	Amount of recovery
97*	29	6	13	10	$105 85
98†	22	1	6	15	92 27
Total	51	7	19	25	$198 12

* Section 97 forbids setting fires without written permit.
† Section 98 makes person who causes fire liable for expense of extinguishing.

In 1908 several disastrous fires were caused by the railroads operating coal-burning locomotives in the Adirondacks. Some of these fires burned over State forest lands. Investigations as to cause, negligence, extent, amount of damage, etc., as a result of such fires were instituted, and actions brought. A careful analysis of the situation disclosed the fact that the Delaware & Hudson Company was not responsible for all the fires alleged to have been caused by it. After a full examination, a settlement was reached. The New York Central Railroad caused two such fires, which burned 1,454 acres near Beaver River, and 500 acres near Saranac Inn. Actions were brought and the cases tried. Judgments were recovered for the entire loss as determined by the jury. It was our contention that although the timber was not consumed, the State suffered a total loss. We conceded that in case of a similar fire on private property, there would have been a deduction for salvage, but contended that in view of many and decided opinions of the Attorney-General in regard to use of such property in similar cases the merchantable material could not be utilized. The railroad company contended that it was entitled to salvage. The Court of Appeals during November handed down an opinion that the measure of damage was the value of property before the fire minus the value after the fire. The court did not pass directly upon the question of utilization of the timber but said the judgment was not upon a proper basis of facts and ordered the case back for a new trial. The verdict in the Beaver River fire case was for $13,500, and in the Saranac Inn fire $9,018.

At the time these fires occurred there was no statute providing penalty for killing of trees by fire. Such a law has since been enacted.

May 21, 1911, this department alleged that the Erie Railroad Company caused a fire which burned over 368 acres of State land in the town of Hancock, Delaware county. Action was brought for penalty and damages. We had but circumstantial evidence as to cause. In former years fires had burned over this area and there was a dispute as to particular trees being killed or injured by this fire. After conferences the railroad company offered judgment for $1,566.67, which was accepted by the Attorney-General. This was under the circumstances a good settlement as it was for more than the value of the property; the company spent a large sum in examining the tract, the title to the land was not perfect, and our proof was not conclusive.

PROTECTIVE MEASURES

A force of sixty-five rangers and forty-nine observers was maintained through the latter part of the fire season. About a third of the rangers and one-half of the observers were appointed during the last ten days of April. Owing to uncertainty as to the funds which would be available for fire protective work, the complete quota of rangers and observers was not obtained until about June 10th. The records of fires during the year demonstrate better than words the efficiency of the force.

One new mountain station was constructed during the year. It is located on Azure Mountain, near Gile, in western Franklin county. This mountain station covers a large area, nearly all of which has been lumbered. These are the areas in which large fires often occur, and the station commands a range of this territory.

The mountain stations have again demonstrated their usefulness and the observers' record shows that with one or two exceptions they attended faithfully to their duties.

The observers are required in most instances to live continuously on the mountain. It has been necessary during the year to build eight new cabins for the mountain stations. Some of these were to replace tents which were used by the observers, but which were

Photo. I. L. Stedman

Forest Fire, McIntyre Mountain — View from Lake Placid Village

far from satisfactory on account of the rigorous weather conditions encountered on the mountain tops. The new cabins have been substantially constructed of lumber or logs, at small expense. The labor has been supplied from the ranger force, and in several instances land owners have donated materials. Eight lookout towers have been erected to take the place of old towers which became unsafe for the observers' use.

List of Mountain Stations in 1914 *and Number of Fires Reported from Each*

STATION	Fire district	County	Town	Fires reported, 1913	Fires reported, 1914
Adams	2	Essex	Newcomb	7	7
Ampersand	1	Franklin	Harrietstown	21	5
Arab*	3	St. Lawrence	Piercefield	4	4
Azure†	1	Franklin	Waverly	.....	1
Bald	3	Lewis	Croghan	47	18
Balsam Lake*	5	Ulster	Hardenburgh	4	2
Beaver Lake*	3	Herkimer	Webb	13	2
Belfry*	2	Essex	Moriah	6	6
Belleayre	5	Ulster	Shandaken	16	4
Black	2	Washington	Dresden	13	8
Blue	3	Hamilton	Indian Lake	14	7
Boreas	2	Essex	North Hudson	6	9
Cat	3	St. Lawrence	Clifton	25	17
Catamount	3	St. Lawrence	Colton	31	15
Cathead	4	Hamilton	Benson	67	40
Crane	2	Warren	Johnsburgh	27	18
DeBar*	1	Franklin	Duane	6	10
Dunbrook†	3	Hamilton	Indian Lake	.....	.....
Fort Noble	4	Herkimer	Wilmurt	11	3
Gore	2	Warren	Johnsburgh	17	17
Hamilton	4	Hamilton	Lake Pleasant	36	24
High Point	5	Ulster	Wawarsing	5	15
Hunter	5	Greene	Jewett	18	.....
Hurricane	1	Essex	Keene	25	43
Kempshall	3	Hamilton	Long Lake	11	9
Loon Lake	1	Franklin	Franklin	16	19
Lyon	1	Clinton	Saranac	27	2
Makomis	2	Essex	North Hudson	9	8
Mohonk	5	Ulster	New Paltz	10	4
Moosehead	3	St. Lawrence	Colton	13	9
Moose River	3	Lewis	Lyonsdale	14	5
Mt. Morris	1	Franklin	Altamont	8	10
Ohmer	4	Saratoga	Day	24	20
Owlshead*	3	Hamilton	Long Lake	7	5
Pharoah	2	Essex	Schroon	22	14
Poke-O-Moonshine*	1	Essex	Chesterfield	6	7
Prospect	2	Warren	Caldwell	24	20
Rondaxe*	3	Herkimer	Webb	8	2
St. Regis	1	Franklin	Santa Clara	7	13
Slide†	5	Ulster	Shandaken	.....	.....
Snowy	4	Hamilton	Indian Lake	29	6
Stillwater	3	Herkimer	Webb	42	22
Swede*	2	Warren	Hague	18	10
Tomany	4	Hamilton	Arietta	.....	2
Tooley Pond	3	St. Lawrence	Clare	.....	5
Twadell	5	Delaware	Hancock	13	2
Vanderwhacker	2	Essex	Minerva	28	12
Wakeley*	4	Hamilton	Lake Pleasant	5	3
West	3	Hamilton	Long Lake	11	.....
Whiteface	1	Essex	Wilmington	19	15
Woodhull	3	Herkimer	Wilmurt	26	4
Total	.....	.....	.....	816	503

* No observers appointed in 1914 until after June 5th.
† Not operated during season of 1914.
‡ Not operated until October 1st

Special efforts have been made to improve the service on the telephone lines owned by the department. A number of the old lines have been repaired and improved; and some new lines have been built to fill in gaps which appeared in the telephone system.

In order to facilitate the making of prompt repairs to telephone lines by observers and rangers, ten new linemen's test sets have been purchased and distributed among the members of the field force at points where they would be on hand in case of line troubles.

The following table summarizes the construction of telephone lines during the year. Nearly all this work was done with ranger labor:

Telephone Lines

District	Miles built 1914	Total miles State line to date
1	1	37
2	30	98
3	5	54
4	3	78
5	2	20
Total	41	287

In order to render large unbroken blocks of forest land more accessible to fire fighters, the rangers and observers have been directed to work at clearing out trails during wet weather. Considerable has been accomplished along this line, as the following table shows.

Trails Cleared Out 1914

District	Miles
1	20
2	30
3	10
4	9
5	6
Total	75

The so-called "top lopping" law remained unchanged during 1914. Its enforcement has been carried out conscientiously by the ranger force. Practically all lumbermen operating within the areas to which this law applies, have done the lopping in a satisfactory manner, only two violations having been reported. These cases are both pending at the time when this report is written.

Mention should be made of the co-operation by the State Department of Highways in the reporting of forest fires. In September a request was made by the Conservation Commission that the Highway Department instruct its road patrolmen to extinguish small fires when they could do so without serious interference with their regular duties, and to report all fires to the nearest forest ranger or fire warden. The Commissioner of Highways acceded to this request and sent letters of instruction to each patrolman employed in the area embraced within the fire towns. In this way, an auxiliary force of seventy-two men has been added to our ranger force. The reporting of fires by rural mail carriers has been continued as in 1913. There can be no doubt that the assistance of these persons is of considerable value. Many fires are started each year by persons traveling along the highways, and these fires should all be picked up by our new auxiliary observers.

The tables accompanying this report summarize the fires of the year classified in two ways — by counties and by causes. The preventive and protective measures have held down the acreage covered by the 413 fires to 13,837, as against 54,796 acres burned in 688 fires in 1913. The expense of fighting fires was $13,978.18 in 1914, as against $42,979.04 in 1913; the damage done by fires in 1914 was $14,905 as against $51,455 in 1913.

These figures show a great reduction in both acreage and cost in 1914. While it must be remembered that 1913 was the worst fire year since 1908, still there were two or three periods of great drought in 1914, namely in May and early June, in September, and in late October and early November. The last period was especially dry in the Catskill region.

Forest Fire Losses, 1914, by Counties

COUNTY	Number of fires	Total acreage burned	Total expense of fighting fires	Acres Private Land Burned				Acres State Land Burned				Value of standing timber destroyed	Value of logs, lumber, etc., destroyed	Value of buildings, etc., destroyed
				Virgin timber	Second growth	Brush	Waste	Virgin timber	Second growth	Brush	Waste			
ADIRONDACKS														
Clinton	31	686	$1,027 05	.....	51	595	40	.....	.....	.....	.....	$320	.....	.....
Essex	56	1,082	2,746 70	.....	82	235	24	18	493	15	215	850	$360	$5
Franklin	68	4,633	3,767 48	1	400	1,383	1,180	90	6	1,490	83	2,320	40	.....
Fulton	4	104	66 48	.....	100	4	.....	.....	.....	.....	.....	50	.....	.....
Hamilton	42	396	445 10	3	40	217	4	.....	32	50	50	180	.....	50
Herkimer	12	17	121 57	.....	.....	6	5	.....	.....	3	3	20	.....	.....
Lewis	21	278	378 98	.....	30	162	86	.....	.....	.....	.....	90	.....	.....
Oneida	2	125	101 42	.....	100	25	.....	.....	.....	.....	.....	300	.....	.....
Saratoga	12	92	169 55	.....	46	34	12	.....	.....	.....	.....	225	.....	5
St. Lawrence	49	1,880	1,007 27	1	131	1,439	309	.....	.....	.....	.....	375	.....	.....
Warren	43	587	767 75	5	315	124	93	.....	20	20	10	1,730	.....	55
Washington	9	43	171 79	.....	6	36	1	.....	.....	.....	.....	50	.....	.....
Total	349	9,923	$10,771 14	10	1,301	4,260	1,754	108	551	1,578	361	$6,510	$400	$115
CATSKILLS														
Delaware	16	155	$111 55	.....	101	1	46	.....	6	.....	1	$175	$405	.....
Greene	15	11	41 72	.....	9	1	1	.....	.....	.....	.....	110	.....	.....
Sullivan	3	34	37 95	.....	34	.....	.....	.....	.....	.....	.....	270	.....	.....
Ulster	30	3,714	3,015 82	32	1,667	795	1,058	.....	82	30	50	6,915	5	.....
Total	64	3,914	$3,207 04	32	1,811	797	1,105	.....	88	30	51	$7,470	$410	.....
TOTALS														
Adirondacks	349	9,923	$10,771 14	10	1,301	4,260	1,754	108	551	1,578	361	$6,510	$400	$115
Catskills	64	3,914	3,207 04	32	1,811	797	1,105	.....	88	30	51	7,470	410	.....
Total	413	13,837	$13,978 18	42	3,112	5,057	2,859	108	639	1,608	412	$13,980	$810	$115

Forest Fire Losses, 1914, by Causes

CAUSE	Number of fires	Total acreage burned	Acres Private Land Burned				Acres State Land Burned				Value of standing timber destroyed	Value of logs, lumber, etc., destroyed	Value of buildings, fences, etc., destroyed
			Virgin timber	Second growth	Brush	Waste	Virgin timber	Second growth	Brush	Waste			
ADIRONDACKS													
Smokers	93	1,695	1	231	1,185	236	.....	.....	2	40	$950	$355	$35
Fishermen	57	5,643	1	616	1,899	1,427	87	25	1,485	103	3,025	.....	.....
Hunters	36	510	.....	209	135	30	.....	80	38	18	665	.....	10
Campers	28	217	.....	6	2	5	.....	5	1	198	60	.....	.....
Incendiary	27	589	3	44	47	1	15	440	37	2	325	.....	.....
Lightning	26	164	5	12	143	.....	3	1	.....	.....	280	.....	.....
Locomotives	25	112	.....	26	39	47	.....	.....	.....	.....	125	.....	.....
Berry pickers	21	111	.....	24	67	5	.....	.....	15	.....	205	.....	50
Clearing land	16	84	.....	68	15	1	.....	.....	.....	.....	420	.....	20
Burning buildings	9	740	.....	38	702	.....	.....	.....	.....	.....	245	35	.....
Bee hunters	2	6	.....	6	.....	.....	.....	.....	.....	.....	25	.....	.....
Children	2	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
River drivers	2	26	.....	.....	26	.....	.....	.....	.....	.....	.....	.....	.....
Ginseng diggers	1	20	.....	20	.....	.....	.....	.....	.....	.....	100	.....	.....
Gum pickers	1	3	.....	.....	.....	.....	3	.....	.....	.....	75	.....	.....
Lumber jacks	1	3	.....	1	.....	2	.....	.....	.....	.....	10	10	.....
Sawmill	1	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Traction engine	1	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	349	9,923	10	1,301	4,260	1,754	108	551	1,578	361	$6,510	$400	$115
CATSKILLS													
Locomotives	25	424	.....	212	201	4	.....	6	.....	1	$575	.....	.....
Smokers	20	2,110	2	907	390	811	.....	.....	.....	.....	2,525	$110	.....
Hunters	6	615	.....	488	75	.....	.....	52	.....	.....	3,500	.....	.....
Clearing land	4	300	.....	30	30	240	.....	.....	.....	.....	250	300	.....
Burning buildings	3	435	30	145	100	50	.....	30	30	50	450	.....	.....
Bee hunters	2	5	.....	5	.....	.....	.....	.....	.....	.....	75	.....	.....
Incendiary	2	3	.....	2	1	.....	.....	.....	.....	.....	20	.....	.....
Campers	1	12	.....	12	.....	.....	.....	.....	.....	.....	50	.....	.....
Lumber jacks	1	10	.....	10	.....	.....	.....	.....	.....	.....	25	.....	.....
Total	64	3,914	32	1,811	797	1,105	.....	88	30	51	$7,470	$410	.....

*Fire less than 1 acre in extent.

Forest Fire Losses, 1914, *by Causes* — (Concluded)

CAUSE	Number of fires	Total acreage burned	Acres Private Land Burned				Acres State Land Burned				Value of standing timber destroyed	Value of logs, lumber, etc., destroyed	Value of buildings, fences, etc., destroyed
			Virgin timber	Second growth	Brush	Waste	Virgin timber	Second growth	Brush	Waste			
						TOTALS							
Adirondacks	349	9,923	10	1,301	4,260	1,754	108	551	1,578	361	$6,510	$400	$115
Catskills	64	3,914	32	1,811	797	1,105	.....	88	30	51	7,470	410	.....
Totals	413	13,837	42	3,112	5,057	2,859	108	639	1,608	412	$13,980	$810	$115

Less than two-tenths of one per cent of the area under protection was burned. The cost of protection on the entire area of 7,270,000 acres included in the fire towns was less than one cent per acre. This figure includes salaries and expenses of the fire protection force, expense of equipment, and the cost of extra labor employed to fight fires.

There were four bad fires during the year, three in the Adirondacks and one in the Catskills. The first was in the town of Keene, Essex county, and burned over 425 acres of State land. This fire was thought to be of incendiary origin, although all efforts to apprehend the offenders have failed.

The second fire was in the town of Santa Clara, Franklin county. It started from a small fire — probably left by fishermen — when a terrific wind sprang up on the afternoon of May 31 and swept the flames across 1,550 acres of State land before they could be controlled by the fire fighters. All but eighty-five acres of the above area was land which had previously been burned over.

The third fire occurred in the town of North Elba, Essex county, in the latter part of June. It was apparently caused by the carelessness of some person passing along the trail from Lake Placid to Mt. Marcy. The fact that the fire, although in an almost inaccessible portion of the mountains, did not burn over more than 200 acres before it was checked, redounds greatly to the credit of the fire fighters.

In the Catskills no great damage was done by fires, until one was started near Mt. Pleasant, presumably by hunters, on October 12. Although quick action by the ranger force got men on the fire line promptly and kept them there day and night until rain finally came, a large quantity of timber was destroyed on the 450 acres burned over.

It is interesting to note the effect of the period of dry weather as indicated by the accompanying tabulation of fires classified by months and counties. More fires originated in May than in any other month. May is ordinarily a bad month for fires since the snow has mostly gone from the ground and the green vegetation has not yet appeared. These conditions prevailed this year, and to make matters worse very little rain fell during the entire month.

Forest Fires, 1914 — *Summary by Months and Counties*

COUNTY	MONTH									
	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Totals
ADIRONDACKS										
Clinton	....	1	10	8	3	6	2	....	1	31
Essex	2	1	11	12	10	9	1	4	6	56
Franklin	....	1	25	12	8	14	2	5	1	68
Fulton	....	....	1	1	....	....	....	2	....	4
Hamilton	....	....	7	7	1	6	3	17	1	42
Herkimer	....	1	1	1	1	6	....	2	....	12
Lewis	....	1	5	4	2	5	1	2	1	21
Oneida	....	....	....	2	....	....	....	....	....	2
Saratoga	....	....	2	3	....	5	....	2	....	12
St. Lawrence	....	....	19	7	1	12	4	6	....	49
Warren	....	....	15	10	5	7	....	3	3	43
Washington	....	....	2	....	1	3	....	2	1	9
Total	2	5	98	67	32	73	13	45	14	349
CATSKILLS										
Delaware	....	....	10	3	....	....	1	1	1	16
Green	....	....	7	2	1	2	1	2	....	15
Sullivan	....	....	1	....	....	....	1	1	....	3
Ulster	....	2	9	3	....	....	3	12	1	30
Total	....	2	27	8	1	2	6	16	2	64
SUMMARY										
Adirondacks	2	5	98	67	32	73	13	45	14	349
Catskills	....	2	27	8	1	2	6	16	2	64
Total	2	7	125	75	33	75	19	61	16	413

WEEKS LAW

Under the provisions of the Weeks Law, an allotment of $10,000 was made by the United States Department of Agriculture for the use of New York State in protecting the forests from fire on the watersheds of navigable streams. Of this amount $8,000 was made available for use within the area included in the "fire towns." In 1913, the allotment for use in the fire districts was only $5,000; but at the end of the year the Commission requested that it be increased to $10,000 in 1914. The allotment under the Weeks Law depended upon the approval of an item in the United States Department of Agriculture appropriation bill which came before Congress last spring. Letters were sent by the Conservation Commission to all of New York State's senators and representatives in Congress, asking them to work for the passage of the above item. Practically all the Congress-

men stated that they favored its passage, and the bill was finally passed.

New York was allotted $8,000, which was used to pay the salaries of seventeen observers on mountain stations for six and one-half months. During the dry period of the early fall eight additional observers were designated as emergency employees under this act and paid from this fund for a period of about five weeks.

The cooperation of rural mail carriers and star route carriers was continued as in 1913. Two fires, according to the records, were reported by these men in 1914.

RECOMMENDATIONS

The greatest single need of the fire protective organization is an assured and ample appropriation. In my opinion, the complete summer force of rangers and observers should be appointed not later than April 15, and in some districts these men should be on duty by April 1. During the past two years it has been impossible to do this on account of the uncertainty as to the amount which would be available for the work.

Furthermore, there is need of at least eight new mountain stations. These stations should be constructed, equipped and manned in the spring of 1915. The equipment at all the mountain stations should be gone over and much of it renewed. A few of our lookout towers are becoming unsafe and should be replaced with steel towers.

The publication of a Manual of Instructions for the use of rangers and observers is strongly urged. Copy for such a publication has been prepared and could be made ready for printing at once. A manual of this kind would make it easier for the field employees to do their work right; it would greatly lessen the work of this office in correcting errors made in the field; and it would improve the efficiency of the force.

With but one exception our rangers are being paid sixty dollars per month and their traveling expenses. The maximum salary which the law allows a ranger is seventy-five dollars per month. Rangers' expense accounts average thirty dollars per month. I believe we would be able to secure better men for the position of

ranger if we should pay a fixed salary of, say, eighty-five or ninety dollars per month with no allowance for expenses. It should be stipulated that, where necessary, the ranger should keep a horse. In order to pay the salary mentioned above, an amendment to the statute would, of course, be necessary.

There are a number of rangers who have been in the employ of the Department for several years. Some of these men have proved their ability and their experience has made them more valuable for the work. I believe that small increases in salary should be given to those rangers who have earned them by meritorious service.

The area within which the Conservation Commission has jurisdiction over fire protection is defined by section 97 of the Conservation Law. This section enumerates ninety-seven towns in the Adirondack and Catskill regions which comprise the protective area. The intent of the framers of the law was apparently to name the towns which would include the more densely forested portions of the regions in question.

However, in the Catskill region there are large areas of forest land outside of the present fire towns. In Greene county the town of Halcott is largely forest land. To include this town as a fire town would not only extend fire protection to areas where it is needed, but would also facilitate the administration of the fire law by rounding out the exterior boundaries of the protective area.

Quite another condition exists in Sullivan county. Two forest towns — Neversink and Rockland — in the northern part of the county are now included among the fire towns. A belt of forest extends around the outside of the county, although the central portion is agricultural land. In order to facilitate administration, I recommend that the entire county be included in the protective area.

CUBA RESERVATION

The plans made last year have, during this season, been put into effect. The survey to locate the boundaries of the property has been completed. Seventeen concrete and numerous iron monuments designating corners have been erected. Such portions of the property as are suitable for camp sites have been surveyed

into lots. A map showing the allotment is in preparation. Two hundred and sixty-six lots with approximately one hundred feet frontage each have been made.

Careful consideration was given to the preparation of a lease. It was determined that five years (the limit defined by statute) was the most desirable period that could be arranged. The lease requires payment annually in advance, contains restrictions as to erection of buildings, and provides that assignments of lease shall not be made without the approval of the Commission. Various rules and regulations (published in full below) were adopted and made a part of the lease.

Rules and Regulations Governing the Use and Occupation of the Premises Leased Pursuant to the Provisions of the Agreement Hereto Attached

1. No permanent structure or addition to existing structure shall be erected upon leased premises without the written consent and approval of the Conservation Commission.

2. Tents are not to be pitched without the written consent of the Conservation Commission, or its duly authorized agents.

3. Before the work of construction is begun the plans of any proposed structure must be presented to the Commission for written approval.

4. No dock or docks shall extend into the water of the lake more than fifty feet from the shore line and such lines to be determined by the level of the spillway, without the written consent of the Conservation Commission. In case, however, the depth of the water at the end of such dock or docks is less than four (4) feet such dock or docks may be extended to such depth.

5. All buildings shall, at reasonable hours, be open to inspection by officials of the Conservation Commission or its duly authorized agents in order to determine if the provisions of the lease are being complied with.

6. The Conservation Commission or its duly authorized agents shall have the right of passage over any leased property.

7. No business of any character shall be conducted on premises herein leased without a special written permit from the Commission.

8. All cottages shall be equipped with a fire extinguisher of a kind which shall be approved by the National Board of Underwriters.

9. In case of fire of any character on or near State property, occupants of State land may be called upon to fight the same without pay.

10. Firearms must be used carefully so that there will be no danger to human life or property.

11. Each privy shall be equipped with removable galvanized iron cans or any metal water-tight container and the privy shall be built in such a way that the cans may be easily removed.

12. Each lessee shall provide a plentiful supply of lime and dirt and use the same in any privy on said premises and such privy shall be cleaned and all fecal matter removed by the lessee at such frequent intervals as to prevent offensive and unnecessary odors.

13. Every cottage shall be equipped with an iron garbage can with cover and all garbage must be placed therein and shall be removed by the lessee at frequent intervals.

14. No garbage, dishwater, sweepings, bottles, broken glass or waste material of any character shall be thrown in the lake.

15. Each lessee will be held responsible for his leased parcel and must keep it free of broken glass and debris of all kinds.

16. Stable manure must not be deposited within thirty feet of the shore line and must be removed at least every two weeks.

17. The Conservation Commission reserves the right to promulgate and enforce regulations in regard to contagious or infectious diseases.

18. No trees or shrubbery upon the reservation shall be cut or mutilated without the written consent of the Conservation Commission. Horses must not be hitched to trees.

19. The Conservation Commission shall have the right to plant trees on any location which will not interfere with the proper use of the lands by lessee.

20. Lessees shall do all in their power to keep the land and water of the reservation clean, sightly and sanitary.

21. The Conservation Commission will require that order and decorum be observed at all times.

22. Lessees are required to assist in the prosecution of any violations of the law committed upon the lake or upon lands owned by the State adjacent thereto.

23. To best promote the interests of all concerned, the Conservation Commission requests that every occupant of the reservation promptly report to the Conservation Commission or its duly authorized agent every infraction of these rules and regulations.

The foregoing rules were duly adopted by the Conservation Commission on the 13th day of May, 1914.

A conference was held at Cuba with a committee of cottagers and these provisions were finally accepted. It was also decided that $15 was a fair and equitable annual rental value for a lot.

Since May 1st leases have been executed as follows:

167 cottage lots, at $15	$2,505 00
1 boathouse site, at $3	3 00
14 agricultural leases	121 20
1 store permit	10 00
Total revenue (gross)	$2,639 20

The only fixed annual expense is that of a caretaker, who at present receives a salary of $600. There should also be a small sum for miscellaneous expenses. We believe that a large number of additional leases will be applied for next year and estimate that the gross income will reach $3,000.

The wisdom of the statute fixing a policy for the use of this property and providing for administration thereof has been markedly demonstrated. The people residing thereon were formerly "squatters" and there was no one in authority. They welcome the security of a lease, the effect of authority and benefits which accrue therefrom. This has led to a definition of area. They now feel secure in their rights and are making improvements. The general aspect, the sanitary conditions and type of buildings have been greatly improved.

The State lands about the lake are practically treeless. Inasmuch as this is and will continue to be a great summer resort,

we should at once begin extensive tree planting for shade purposes. A plan to carry out such an idea has already been prepared. An appropriation should be made to carry on the work.

LEGISLATION

The past few years embrace a period during which there has been much discussion and effort put forth along the line of advanced forest legislation. The central feature has been the State's control over private forests. There have been many persons and various organizations interested in these conferences. Many proposed measures have been drafted, but the bill introduced at the last session of the Legislature was supposed by its sponsors to cover the situation.

The principle of the proposed legislation was State control, in some cases optional and in others mandatory, but in any event, the owner received relief from taxation and usually other benefits. The main features of the bill were embodied in sections 88, 88a, 88b, 89 and 89a. For the convenience of the reader an attempt has been made to prepare a synopsis of the several provisions. There is a distinction made according to the location of lands. The classification depends upon whether or not they are located within either the Adirondack or Catskill parks. Each section will be considered separately and in order:

Section 88. This, the first provision, is the entering step. It is entirely optional, and may be said to provide for a declaration by an owner that he desires to place his property under a system of forest management, controlled by the State authorities. It applies to any private land within the parks and to "unimproved," "non-agricultural" lands whose value is $10 per acre or less if located without the parks. The prescribed procedure is an application by the owner, an examination by the Commission, submission of a plan for management by the owner and approval of the latter by the Commission. The advantages to the owner are that it permits him to be entitled to the benefits as provided by section 88-b (State to reforest) also section 89-a (State to pay taxes).

Section 88-a. This section in brief means compulsory reforestation under certain conditions. It is applicable within the parks

only where the forest growth is destroyed and the land is unimproved and non-agricultural, provided the owner does not enter his land under section 88. It provides that the owner of such lands shall after notice reforest, or if he fails, the State shall do so; that an account of the cost shall be kept and that the expense incurred by the State shall be subject only to existing liens and taxes; that interest shall be computed at 4 per cent. simple. Cutting of timber is made subject to State control and the expense incurred by the State must be paid before removal of the timber. There is no provision for tax reduction but the State cannot be reimbursed for its outlay in excess of 50 per cent. of the stumpage value.

Section 88-b. This provision provides for the State to contract to reforest private lands. It applies to lands entered under section 88 if in parcels of 300 acres or upwards. The owner may apply but the State must reforest when such applications are made. The future lumbering is restricted. The expense of planting, with 4 per cent. simple interest, becomes a lien on the wood growth only, but the State cannot recover on account of such expense more than 50 per cent. of the stumpage value, on account of such disbursements. The owner is entitled to the taxation provisions of section 89-a. A cutting tax of 10 per cent. is levied in lieu of taxes advanced.

Section 89. This is the present provision of the Conservation Law relative to taxation of forest lands. It was amended in the bill so as to apply only to lands without the Adirondack and Catskill parks.

Section 89-a. This section provides that the State pay taxes on forest lands under certain conditions. It is applicable to private lands in parcels of 100 acres or upwards, whose land value is $10 or less per acre, situate within the parks, provided they have been classified under section 88 or 88-b. It fixes an assessment value of the land, exclusive of minerals or improvements, for a fifty-year period. Lands covered with forests or lands planted may be included. The cutting is regulated. The land and forest growth shall be separately assessed. The owner shall pay the tax on the land as assessed. The timber shall be separately assessed and the State shall pay the tax. A graduated cutting tax

is provided, which is paid to the State as reimbursement for taxes paid. The State Comptroller has some authority in limiting expenditures of money in tax districts.

The Commission opposed the passage of this bill for the reason that it contained provisions believed to be contrary to the interests of the State. An analysis of the several provisions and of their application will, we believe, convince anyone that the facts more than justify our position. A full discussion of this bill was set forth in a statement, made by the Chairman of the Commission, as follows:

"Our opposition to this law is based upon the broad ground that it is grossly unjust to the State.

"This statute commits the State to the policy of expending the moneys of the State for (1) reforesting the denuded lands of private owners; (2) paying taxes upon the value of trees growing upon private lands.

"No State or nation has ever, to my knowledge, undertaken to expend money for the improvement of private property or for the payment of taxes on such property.

"Some States pay taxes upon their own forest lands, and in rare cases States have exempted some woodlands owned by persons from taxation; but no State has ever before, I believe, actually paid the taxes upon such private property or expended moneys thereon for the improvement thereof.

"A brief digest of the provisions of this law will serve to elucidate my point of view.

I. The State Required to Pay the Cost of Reforesting the Denuded Lands of Private Owners

"This statute provides that the State shall at its own cost reforest all lands, 'suitable for tree growth' situate on any watershed of the State provided that (1) the value of the lands alone, exclusive of any trees thereon does not exceed ten (10) dollars per acre; (2) that the area of such lands is not less than three hundred (300) acres in contiguous parcels; (3) the owner classifies the same as forest lands, and agrees to conduct lumbering operations thereon according to the plans of the Conservation Commission.

"The cost of reforesting such lands with simple interest at 4% shall be a lien upon the trees (not on the land) which may grow thereon, *subject to existing liens, but in no event shall such lien exceed fifty per centum* (50%) *of the value of the trees at the time of cutting.*

II. The State Required to Pay the Taxes Upon the Value of the Trees on Private Lands

"In the event that the lands so reforested at the expense of the State are situate in the Adirondack or Catskill Parks, the owner shall be exempt from the payment of taxes upon the value of the trees which may grow thereon for a period of fifty years, and shall only be required to pay taxes upon the value of the land exclusive of the trees.

"This provision for the exemption from taxation upon the value of growing trees not only applies to the lands so reforested by the State but also to all private wood lands and timber lands situate within the Parks, if such lands are classified as above.

"You will observe, therefore, that the only tax which the owner is required to pay upon his forest lands within the Parks is upon the valuation of such lands exclusive of the value of any trees thereof. Such valuation shall not be increased for a term of fifty years. The foregoing provision applies to areas upon which there exists a valuable tree growth as well as to denuded lands which have been reforested by the State.

"On the other hand all taxes upon the value of the trees shall be paid by the State for such period. The assessor of the Tax District in which such lands are situate is required to assess the value of the trees annually, and upon such valuation the State pays the taxes. In short, this statute provides that the State shall pay all taxes on the value of trees which enhances in value year by year and which is the most valuable part of any forest land, while the owner pays taxes upon the bare land which, exclusive of the trees, is generally of very small value.

"In lieu of all these taxes paid by the State the owner is required to pay a cutting tax of ten per cent. (10%) upon the value of the timber removed from the lands reforested at the expense of the State and upon all other forest land a graduated

cutting tax varying from two per cent. (2%) to six per cent (6%) of such value according to the time of cutting and removal of such timber ranging from ten to fifty years.

"The foregoing is the gist of this proposed law. In the case of denuded lands requiring reforestation it provides for a sort of copartnership arrangement with the owner of private lands to conduct lumbering operations thereon. The owner furnishes the land while the State furnishes the trees and plants the same. The owner pays the taxes on the bare land exclusive of the trees at a valuation fixed for fifty years. The State pays all taxes on the value of the trees which increase annually, and at the end of a period of fifty years the actual cost of reforesting with simple interest at four per cent. (4%) per annum plus a cutting tax of ten per cent. (10%) is returned to the State, but in no event is the State entitled to receive more than fifty per centum (50%) of the value of the timber subject always to any prior existing lien or incumbrance.

"With regard to all other forest lands in the Parks, i. e., private lands not requiring artificial reforestation on which there exists tree growth of potential value, the owner pays taxes on the value of the land only, and the State the taxes on the value of the trees in lieu of which the State receives a cutting tax of five per cent. (5%) of the value of the timber removed at the end of fifty (50) years.

"Reliable estimates based upon experience show that the average value of the Park lands exclusive of trees does not exceed two dollars ($2) per acre; that the average cost of reforesting the denuded lands is eight dollars ($8) per acre, and the average value of the timber on cut lands where trees of potential value now exist is about six dollars ($6) per acre.

III. The Effect of this Proposed Statute with Respect to Denuded Lands

"It is estimated that there exist within the State 430,000 acres of denuded private lands suitable for tree growth to which this law is applicable. If reforested pursuant to the provisions of this law the State must expend three million, four hundred and forty thousand dollars ($3,440,000). In this proposed

venture the State furnishes practically the entire capital — to be precise, the State invests eight dollars ($8) every time the owner furnishes two dollars ($2). The State assumes the entire risk of destruction by fire and storm or injury by trespass, and at the end of the period can in no event receive more than one-half of the value of the crop. The owner has practically nothing to lose and everything to gain; the State has everything to lose and nothing to gain. Would one private individual enter into a similar contract with another? Will you undertake to reforest my denuded lands upon the same terms?

"No business man would think of doing such a thing. Very much less would any sensible man make such a bargain if he was required to pay all taxes upon the growing crop of trees for a period of fifty years.

"The State of New York owns to-day approximately one hundred and twenty thousand acres of denuded lands suitable for reforestation. These lands should be reforested before the State enters upon the task of entering upon a jug-handle arrangement to expend its money to improve private property for the benefit of private individuals. Why not bend its energies toward the reforestation of its own lands?

"If the reforestation of its own denuded lands by the State fails to insure adequate reforestation of our own forest covers, why not purchase such lands from the private owners and plant the same with trees? Would not such a course be wiser and more in tune with a legitimate governmental function than to enter into a copartnership arrangement with private individuals?

IV. The Effect of the Taxative Provisions of the Proposed Statute

"The provisions of this law relating to taxation apply to two classes of private lands situate in the Adirondack and Catskill Parks:

"(1) Denuded lands suitable for forest growth.

"(2) Cut-over forest lands upon which there exists a stand of trees growing of potential prospective value.

"A conservative estimate of the quantity of such denuded lands is four hundred and thirty thousand (430,000) acres, and of such cut-over lands one million seven hundred thousand (1,700,000) acres

" The owner is required to pay taxes on the value of the land alone exclusive of the trees, viz., two dollars ($2) per acre on an average, which remains fixed for fifty (50) years, and the State pays the taxes upon the value of the trees, which in the case of reforested lands is eight dollars ($8) per acre, as shown above. The value of the trees upon which the State pays taxes increases year by year.

"Assume for the sake of argument that the average increase in value of the trees in each case is one dollar per acre per annum. This is a very low estimate — much below the estimate of experts — and, moreover, it is obvious that unless such increase in value exceeds this estimate the State will not receive the amount expended for reforesting lands with interest added.

" Upon this very low basis of increase you will observe that the average value of the trees for fifty years will be on reforested lands twenty-nine dollars ($29), and upon cut-over lands twenty-eight dollars ($28) per acre.

" Let us further assume that the assessors fix a valuation for taxation purposes at sixty per centum (60%) of the actual value— or, say, twenty dollars ($20) per acre per annum on an average. The records will show that the average tax rate in the Adirondack and Catskill Park section is about two per cent. (2%) per annum upon the assessed valuation.

" Therefore, the State in fifty years' time would pay out in taxes twenty dollars ($20) per acre, and in lieu thereof would receive at the end of such time a cutting tax of ten per centum (10%) or five dollars and eighty cents ($5.80) per acre on reforested lands, and five per centum (5%), or two dollars and eighty cents ($2.80) on cut-over lands — a loss of fourteen dollars and twenty cents ($14.20) per acre on one, and about seventeen dollars and twenty cents ($17.20) per acre on the other, making a total loss to the State of over six million dollars ($6,000,000) on the four hundred and thirty thousand acres

(430,000) of denuded lands requiring and suitable for reforestation, and over twenty-nine million dollars ($29,000,000) on the one million, seven hundred thousand acres of cut-over lands.

" One-half of this loss would be sufficient to purchase all these lands and defray the cost of planting such as require reforestation.

" It may be that some of the figures taken are not without question, yet we have endeavored to assume rates of growth, land values, rates of tax, stumpage values and other conditions which do not prejudice our argument. In some instances, higher figures might well be taken, but if so, the State's loss would be greater. Any errors of this kind will not materially vary the calculation or fail to show the futility of such a law as an example of State policy.

" It is, however, apparent that the State could by one-half the proposed expenditure acquire and reforest this area and thus be the owner of the property. Whatever indirect benefits would result would similarly accrue under State ownership."

FOREST PRODUCT

I again submit statistics showing our annual forest product. These figures are for the year 1913, because it is impossible to compile data of a current year in time to incorporate in the report therefor. Reports have been received from all the known mills in the State that operated last year. A comparison of the total product with that of other years shows a continued decrease.

Comparison of Forest Products by Years

Year	Feet B. M.
1908	1,226,757,365
1909	1,091,164,710
1910	927,933,291
1911	972,596,685
1912	942,545,269
1913	851,391,367

Forest Product 1913

Lumber	Feet B. M.	Number of Mills
Spruce	35,492,950	325
Hemlock	121,867,000	1,481
Pine	66,200,650	1,028
Maple	71,553,900	1,172
Birch	28,568,950	549
Beech	40,313,250	821
Basswood	24,818,294	1,183
Oak	24,788,250	871
Chestnut	16,683,700	577
Elm	11,016,425	758
Ash	9,927,700	927
Poplar	1,364,525	202
Hickory	1,298,120	255
Cherry	2,856,700	381
Balsam	360,900	10
Cucumber	204,750	15
Butternut	69,225	21
Cedar	21,900	4
Willow	59,550	6
Locust	180,450	12
Tamarack	23,750	8
Black walnut	12,300	5
Sycamore	5,000	3
Ironwood	1,600	5
Gum	29,000	2
Total	457,718,839	
717,072 cords, equivalent, B. M.	393,672,528	
Grand total	851,391,367	

		Cords
Round Wood:		
For excelsior, kilns, alcohol, etc.		258,703
Pulpwood:		
Spruce	327,905	
Hemlock	38,078	
Balsam	42,930	
Poplar	43,981	
Basswood	5,475	
		458,369
Total		717,072

	Pieces
Shingles	22,614,750
Lath	23,823,440
Heading	9,715,500
Staves	49,571,300
Railroad ties	759,687
Posts	466,965
Poles	68,152

Figures as such mean little, but they enable important facts to be deduced. Attention is drawn to the rapidly decreasing cut of forest products in this State. The comparison would be many times greater if the product of a half century ago were taken. Another comparison could be drawn showing our rapidly increasing consumption. Decreasing supply and increasing demands mean rapid exhaustion.

As a people who are interested in the future of our State, these are facts we must carefully consider. We must change our idea of the forests. We must see the forest as a growing wood crop and, what is more, treat it as such. Forestry is not sentiment, it is business. It is growing wood crops. We not only thus secure and assure a future wood supply, which is so necessary to us as a State, but also derive numerous and incalculable benefits, such

as protection to our watersheds, profitable use for poorer soils; we afford a game cover, add to the appearance of the community, and secure raw materials and a field for employment of labor and support of industries.

EXTENSION

In accordance with our past policy, we have endeavored to meet requests for information in regard to forestry questions. This information has been circulated by means of correspondence, pamphlets, exhibitions and lectures.

There are thousands of land owners who do not realize the profit that might come to them through the proper use of their non-agricultural lands. There are benefits that they might enjoy through the provisions of the tax laws, which we administer. Such benefits would accrue not alone to these people, but to the whole State. We felt that the best way to interest this class of people was by a small and inexpensive exhibit at various agricultural fairs. We, therefore, arranged exhibits and had a competent man at twenty-seven such fairs together with a demonstration of a small forest plantation and planting stock. The general forestry work was explained by means of charts. Circulars giving information in regard to reforesting, selection and purchase of trees, and provisions of the Tax Law were distributed.

The fairs selected were held in localities where the application of our exhibit was possible, and an attempt was made to cover the entire State as far as possible. The exhibits were made as follows:

August 11-14.	Oswego County Fair at Fulton.
August 11-13.	Silver Lake Agricultural Fair at Perry.
August 18-21.	Cortland County Fair at Cortland.
August 18-20.	Albany County Fair at Altamont.
August 18-21.	Rensselaer County Fair at Troy.
August 25-28.	Orange County Fair at Middletown.
August 24-28.	Saratoga County Fair at Ballston.
August 25-28.	Essex County Fair at Westport.
Aug. 31-Sep. 4.	Oswegatchie Agricultural Fair at Ogdensburgh.
September 1-4.	Tioga County Fair at Owego.

Photo. G. L. Farrus

FORESTRY EXHIBIT AT COUNTY FAIRS.

Sample Plots of Plantations Show Kinds and Size of Trees, Spacing, and Methods of Planting

September 1-4. Wellsville Agricultural Fair at Wellsville.
September 1-4. Delaware Valley Fair at Walton.
September 1-4. Warren County Fair at Warrensburgh.
September 7-11. Chemung County Fair at Elmira.
September 7-11. Olean Agricultural Fair at Olean.
September 8-11. Boonville Agricultural Fair at Boonville.
September 7-11. Columbia County Fair at Chatham.
September 7-11. Clinton County Fair at Plattsburgh.
September 16-19. Genesee County Fair at Batavia.
September 15-18. St. Lawrence County Fair at Canton.
September 15-18. Franklin County Fair at Malone.
September 22-26. Queens County Fair at Mineola.
September 22-25. Erie County Fair at Hamburgh.
September 21-25. Cobleskill Agricultural Fair at Cobleskill.
September 29-October 2. Binghamton Industrial Exposition at Binghamton.
September 29-October 3. Montgomery County Fair at Fonda.
September 7-19. Rochester Industrial Exposition at Rochester.

It is too soon to measure the results of this effort. We found much interest taken, secured names of interested parties, and sold a large quantity of trees.

A bulletin on forest fires has been issued during the year. It has served the purpose admirably and residents have evinced much interest in this important work. We have prepared the manuscript for two bulletins relative to the Forest Preserve. Our supply of Bulletin 7, "Shade Trees," and Bulletin 9, "Farm Woodlot," has been entirely distributed and new editions should be printed. We have also issued a poster for use at Farmers' Institutes and other gatherings of this kind.

REFORESTATION

The actual reforestation of our idle non-agricultural lands has been pushed with increased vigor, and greater progress has been made. The inventory of the nurseries shows an increase in quantity; the purchase by private owners indicates a continued and increased interest; the consumption by State institutions has reached a figure not heretofore attained; while the reforestation

by us of the denuded lands in the Forest Preserve has on but one occasion (1912) been equalled, while other years show but a small portion of such a large area planted.

NURSERIES

The same nurseries were in operation as in 1913. The only increase in extent is at Saratoga where a small additional area was made available. We are endeavoring to place all of our nurseries on a crop rotation basis, i. e., use the soil for three to four years for production of stock, then apply a heavy coat of manure and sow a soil crop for one to two years. This results in far better trees, prevents deterioration of soil and maintains fertility at lowest cost. This plan will not necessarily mean extension of area or reduced output because we are using a different transplant spacing. We have departed from our former system of six-foot beds with two-foot paths, and now set the trees in large blocks about fifty feet square. We have changed the spacing from three to one and one-half inches for trees in the row, while the distance between the rows has been increased from six to nine inches. The net result is that the transplant area will be increased sufficiently to allow for the crop rotation. We shall have a greater stand per acre and the new spacing will permit use of wheeled hoes. These factors will decrease the weeding expense and thus tend to lower production cost.

The inventory of stock on hand November 23, 1914, shows a total of 32,182,600 evergreen and 796,100 hardwood seedlings and cuttings, or a grand total of 32,978,700. This is an increase of approximately 5,000,000 over the same time last year. The inventory shows coniferous stock by age classes as follows:

4-year transplants	2,743,000
3-year transplants	7,320,000
3-year seedlings	676,000
2-year seedlings	10,109,000
1-year seedlings	11,334,600
Total	32,182,600

There will be available for sale and field planting in the spring of 1915:

4-year transplants	2,743,000
3-year seedlings	676,000
3-year transplants	5,320,000
2-year seedlings	2,109,000
Total	10,848,000

Inventory of Coniferous Trees in Nurseries November 23, 1914

(All figures represent thousands of trees)

KIND OF STOCK	NAME OF NURSERY						Total
	Saratoga	Salamanca	Adirondack	Syracuse	Comstock	Chubb Hill	
White Pine 4-yr. Tr.*	600	563	46	8	216	10	1,443
White Pine 3-yr. Tr.	575	956	654	116	600	.....	2,901
White Pine 3-yr. S.†	.....	.....	.....	.....	376	.....	376
White Pine 2-yr. S.	385	656	49	.....	1,328	.....	2,418
White Pine 1-yr. S.	1,080	700	104	30	1,218	.....	3,132
Scotch Pine 4-yr. Tr.	.....	35	.....	2	.....	.....	37
Scotch Pine 3-yr. Tr.	300	32	416	66	325	.....	1,139
Scotch Pine 2-yr. S.	160	176	130	128	344	.....	938
Scotch Pine 1-yr. S.	120	160	184	4	530	.....	998
Red Pine 4-yr. Tr.	24	.....	.....	.....	245	.....	269
Red Pine 3-yr. Tr.	650	169	180	26	450	.....	1,475
Red Pine 2-yr. S.	140	180	756	.....	1,712	.....	2,788
Red Pine 1-yr. S.	144	105	700	.....	2,160	.....	3,109
Norway Spruce 4-yr. Tr.	160	62	528	.....	244	.....	994
Norway Spruce 3-yr. Tr.	300	45	631	.....	564	60	1,600
Norway Spruce 3-yr. S.	.....	.....	.....	.....	300	.....	300
Norway Spruce 2-yr. S.	30	522	805	.....	1,936	.....	3,293
Norway Spruce 1-yr. S.	528	540	1,036	42	1,392	.....	3,538
White Cedar 3-yr. Tr.	180	.....	.....	.....	25	.....	205
White Cedar 2-yr. S.	12	15	6	.....	105	.....	138
White Cedar 1-yr. S.	10	30	18	4	110	.....	172
European Larch 2-yr. S.	100	330	.....	28	64	.....	522
European Larch 1-yr. S.	126	75	.....	.....	60	.....	261
Blue Spruce 1-yr. S.	.....	.....	20	.....	.....	.....	20
Balsam 1-yr. S.	.....	.....	1.6	.....	.....	.....	1.6
Hemlock 1-yr. S.	.....	.....	8	.....	.....	.....	8
Maritime Pine 2-yr. S.	.....	12	.....	.....	.....	.....	12
Maritime Pine 1-yr. S.	.....	67	.....	3	.....	.....	70
Siberian Larch 1-yr. S.	.....	1	.....	4	.....	.....	5
Engelman Spruce 1-yr. S.	.....	.....	.....	4	.....	.....	4
White Spruce 1-yr. S.	.....	.....	10	2	.....	.....	12
Douglas Fir, 1-yr. S.	.....	.....	.....	4	.....	.....	4
Total	5,624	5,431	6,282.6	471	14,304	70	32,182.6

* Tr. means transplant, i. e. seedling trees set at a wide spacing in nursery; the age above two years indicates years in transplant beds.

† S. indicates seedlings, i. e. small trees in thick stand in seed beds.

Inventory of Hardwood Trees and Cuttings in Nurseries, November 23, 1914

(All figures represent thousands of trees.)

KIND OF STOCK	NAME OF NURSERY				Total
	Salamanca	Comstock	Syracuse	Saratoga	
Red Oak, 1-yr	27	.....	.....	.....	27
Red Oak, 2-yr	49	196	86	.....	331
Black Walnut, 1-yr	12	.....	.....	.....	12
White Ash, 1-yr	11	.....	.....	.....	11
White Ash, 2-yr	52	39	108	.....	199
Black Locust, 1-yr	52	24	.....	.....	76
Black Locust, 2-yr	.....	10	.....	.....	10
Carolina Poplar Cuttings	40	.....	27	20	87
Carolina Poplar, Rooted Cuttings	12	.....	1	.1	13.1
Willow Cuttings	30	.....	.....	.....	30
Total	285	269	222	20.1	796.1

TREE DISTRIBUTION

There have been sent from our nurseries during the year 4,612,038 trees for forest planting, and 16,560 to State institutions for shade or ornamental purposes.

The sale of trees to private owners was divided as follows: 2,387,125 for spring planting and 222,738 for fall use. The increase in sales is encouraging. The report from planters shows a very large percentage of trees succeeding and making a promising growth. The great problem at present is to interest owners of idle non-agricultural lands and get them to reforest. There is a tendency toward the development of municipal forests. Many of our cities have already reforested large areas on their watersheds.

A very commendable exhibition of civic betterment was exhibited at Saranac Lake. A lecture given by the writer called the residents' attention to the barren and fire-scarred slopes of Baker Mountain, which overlooked a greater portion of the village, and showed them that it was possible to hide this defaced area by reforesting. The Saranac Lake Fish and Game Club immediately took up the work, raised money and purchased 14,000 trees which, with the assistance of the townspeople, were planted on a portion of this mountain owned by the Adirondack Cottage Sanatorium.

There have been given to the various State institutions 908,025 trees for reforesting purposes, and 16,560 trees for shade or orna-

Photo. K. W. Goldnoth

Reforesting Baker Mountain — Work Done by Saranac Lake Fish and Game Club

Photo. K. W. Goldnoth

Baker Mountain, Near Saranac Lake, Denuded by Fire

mental planting. The distribution will be found in the attached table. There have also been taken from the nurseries 1,094,150 trees which were used in reforesting the Forest Preserve.

REFORESTING STATE LANDS

The supply of materials and funds has made it possible this year to make a large planting upon State land. The work has not been confined to one or two localities, as has usually been the case, but plantations already made have been extended and several new ones instituted. We have also done some planting in the Catskill Preserve.

Distribution of Trees to State Institutions

(Quantity and value)

INSTITUTION	FOREST TREES		SHADE TREES	
	Quantity	Value	Quantity	Value
Willard State Hospital	6,000	$19 00	525	$20 75
Central Islip State Hospital	1,000	1 00	.....	.....
Binghamton State Hospital	3,000	12 00	.....	.....
Mohansic State Hospital	1,200	2 43	.....	.....
Hudson River State Hospital	5,500	12 75	675	15 75
Middletown State Hospital	.....	.....	2,800	53 50
Rochester State Hospital	.....	.....	1,900	77 00
Ogdensburgh State Hospital	.....	.....	600	17 00
Kings Park State Hospital	.....	.....	4,000	70 00
Women's Home, Oxford	.....	.....	36	1 08
Letchworth Village	20,000	80 00	125	3 75
Agricultural School, Industry	6,200	22 20	335	16 75
Reformatory, Bedford	1,000	4 00	500	11 00
Craig Colony, Sonyea	19,025	60 29	3,500	35 00
Custodial Asylum, Rome	75,000	117 50	1,564	34 20
Dannemora Prison	143,000	538 00	.....	.....
State College of Forestry	86,500	198 26	.....	.....
Palisade Park Commission	405,000	1,287 50	.....	.....
Saratoga Reservation	65,000	232 50	.....	.....
Niagara Reservation	4,000	11 00	.....	.....
College of Agriculture	46,600	130 23	.....	.....
Stony Point Reservation	1,000	3 88	.....	.....
Malignant Institute, Buffalo	15,000	49 00	.....	.....
Girls Training School, Hudson	4,000	15 00	.....	.....
Total	908,025	$2,796 54	16,560	$355 78

The major part of the planting was done during the months of September and October, although 75,000 trees were planted last spring near Paul Smith's.

The fall plantings were made at or near the following points: Beaver River, Childwold, Paul Smith's, Chubb Hill, Schroon Lake, and Aiden Lair in the Adirondacks. Also Dunraven, Oliverea and Spruceton in the Catskills.

The plantation at Mountain Pond near Paul Smith's, which was commenced in 1905, was increased by planting 100,000 four-year-old white pine during the spring and 530,000 of the various kinds of pine during the fall.

The Chubb Hill plantation, near Lake Placid, was also enlarged by adding 210,000 trees. This planting was done during September and October and the labor performed by twenty-five convicts from Dannemora prison. The growth of the older portion of this plantation is excellent. During the summer a committee of the Wisconsin Legislature visited this and other of our plantations, also the nurseries, and they were greatly impressed with the excellence of the growth and the thrifty appearance of the trees.

Planting was also commenced on a large tract of denuded land near Childwold in eastern St. Lawrence county. The work was supervised by one of our forest rangers. At this place 400,000 four-year white pine transplants were set during the month of September.

The reforestation of an old burn near the head of the Beaver River flow was commenced. Another ranger set out 25,000 four-year-old Norway spruce at this place.

There are several thousand acres of denuded State lands in Township 30, T. & C. P., near Aiden Lair in Essex county. The task of reforesting this large area was commenced this fall when we planted 89,000 white pine and Norway spruce. The work was done by twenty-five convicts from Comstock prison.

Another planting was made in the Adirondacks near Horseshoe Pond about three miles west of Schroon Lake. Ten thousand white pine transplants were set out under the direction of a forest ranger. This is the third plantation in this locality.

There were three plantings made in the Catskills. Fifteen thousand trees were planted by a forest ranger on Balsam Mountain and 12,000 by another ranger near Spruceton, Greene county. The planting of abandoned fields, which are a part of lands acquired for the State Fish Hatchery at Dunraven, was continued. About 100 acres were planted in 1908 and 3,000 more trees were planted this year. The latter work was performed by employees of the fish hatchery.

CONVICT LABOR

We have since 1912, when a nursery of five acres was established at Great Meadow Prison, been using convict labor in growing planting stock. This nursery has since been increased in size. It now has an area of fifteen acres and contains approximately 14,500,000 trees. The management of this nursery has been the same as others. We have purchased all seeds, materials and equipment, also employed necessary supervision. The prison has furnished land and labor. The stock produced has been used the same as if from other nurseries. All the proceeds from sale of trees have been turned into the State treasury. The Prison Department feels entitled to the fruits of this labor, and has asked that we pay over to that department such portion of the proceeds of sales as represents the convicts' work. If this request is to be caried out, it can be done only by an amendment to existing law.

Prison labor was first used for field planting in 1912, when 108,250 trees were planted on the Dannemora Prison lands by convicts working under the supervision of one of our foresters. The result of such planting was very satisfactory and there was an average of fifty-one trees planted per man per hour.

As has already been stated, two crews were assigned to us by the Prison Department this fall for the purpose of reforesting State lands. The question that naturally arises is the efficiency of the labor and the economy resulting. The following table has been prepared to show the comparison of convict and civilian labor for this purpose under similar conditions:

Comparisons of Convict and Civilian Labor — Tree Planting

PLANTATION	Year	Total trees planted	Total hours of labor planting	Average number trees planted per hour	Average per two-men crew ten hours	Hours kitchen labor	Hours kitchen labor per M. trees	Kind of labor
Dannemora.....	1912	108,250	2,151	51	1,020	*	.....	Convict
Mountain Pond.....	1914	100,000	1,583	63	1,260	312	3.12	Civilian
Mountain Pond.....	1914	500,000	9,662	52	1,040	1,130	2.6	Civilian
Aiden Lair.....	1914	89,000	2,220	40	800	760	8.5	Convict
Chubb Hill.....	1914	210,000	4,002	52	1,040	1,410	5.6	Convict
Seveys (Childwold)...	1914	100,000	1,782	56	1,120	†	.....	Civilian

* Data not compiled.
† Men boarded themselves.

The records of 1,120 at Seveys and 1,260 at Mountain Pond are about the average of our former plantings. We have found that two men would average an acre per day, which requires 1,100 to 1,200 trees. It therefore seems fair to say that the best of convict labor will plant about five-sixths or 80 per cent. as many trees as the average of good civilian labor.

An examination of the planting indicates that this labor can be used for field planting and the results so far show no particular difficulty. It is not to be expected that they would be as efficient as average civilian labor, and the progress which they made shows that much can be accomplished by their assistance.

The real question is the saving effected. Under our arrangement with the Prison Department, we were to pay transportation to and from the prison, also maintenance and incidental expenses of the convicts and guards. It is the practice to employ civilian labor locally for planting, therefore the cost of field work usually represents only wages. If men are boarded, the rate of wages is correspondingly less and covers the average price of board. The question of expense, therefore, resolves itself into the expenditures in either case. The question of a saving is answered by a comparison of these two charges.

The following table shows a comparison of expenditures for field work, except transportation of trees. The latter is a variable factor but not dependent upon the kind of labor employed to plant.

Comparative Expenditures, Convict and Civilian Labor

PLANTATION	Total trees planted	COST OF BOARD		COST OF LABOR		COST OF TRANSPORTATION		MISCELLANEOUS COSTS		SUMMARY	
		Total expense	Cost per 1,000 trees	Total expense	Cost per 1,000 trees	Total expense	Cost per 1,000 trees	Total expense	Cost per 1,000 trees	Total expense	Cost per 1,000 trees
Mountain Pond	100,000	$244 29	$2 44	$252 27	$2 52	†	.....	$9 80	$0 10	$506 36	$5 06
Mountain Pond	500,000	936 61	1 87	1,440 70	2 88	†	.....	23 36	05	2,400 67	4 80
Seveys.....	100,000	*	.....	363 15	3 63	†	.....	27 72	28	390 87	3 90
Aiden Lair.....	89,000	388 06	4 35	‡	.....	$116 36	$1 30	46 50	52	550 92	6 19
Chubb Hill....	210,000	491 85	2 34	‡	.....	26 20	12	100 65	49	618 70	2 95

* Men employed locally and boarded themselves.
† Labor secured locally and no transportation paid.
‡ Convict labor used.

The average cost of plantations made with civilian labor was $4.71, while the average cost with convict labor was $3.91. Before a correct conclusion can be drawn, it is also necessary to consider the ease or difficulty of the several planting fields. The conditions at Seveys and Aiden Lair were very similar, while the cover at Chubb Hill and Mountain Pond were very much the same, but planting was slightly more difficult at Chubb Hill on account of the prevalence of large stones and boulders. There were some factors which increased the cost of the Aiden Lair plantation, that could be avoided in the future. These charges are estimated at $1 per thousand. If the convicts assigned to this work are men who are familiar with the use of a grub hoe and in charge of a guard who has had experience in planting and is of the type that is able to get work out of the men, the cost of approximately $3 per thousand at Chubb Hill ought to be a fair basis and would mean a saving of about $1 a thousand in reforesting.

PERSONNEL

During the year there have been many changes in our office force. Of nine men who were employed at the beginning of the year, but five remain. I have already referred to the great loss sustained through the death of David C. Wood, our chief land surveyor.

Mr. Lester S. Emmons, who had been connected with this Commission and its predecessors for a period of nineteen years, resigned on account of personal reasons. He, from 1895 to 1900, was employed as a game protector. In the latter year the position of chief fire warden was created and he, on account of his efficient record as protector, was appointed to this office. During a period of nine years until the office was abolished, he rendred the State very efficient service. He organized the fire force of wardens in the approximately one hundred towns and audited all fire bills wherein the State paid a rebate. This was a most trying and exacting duty. He performed the service with discretion and saved the State many thousands of dollars. After the present protective fire force was inaugurated, he became auditor of fire accounts.

Two foresters, Messrs. Frederick A. Gaylord and Robert Rosenbluth, have resigned to accept positions elsewhere. Mr. Gaylord is now superintendent and forester for one of the largest estates in the Adirondacks, while Mr. Rosenbluth is superintendent of an institution maintained by the city of New York. These men rendered efficient service and knew our work and it is to be regretted that this department cannot secure necessary appropriations to pay them as large salaries as they can command outside.

The efficiency of our work depends upon continued experience and training of our men, and results cannot be accomplished unless men who know what is to be done and how to do it can be retained.

Respectfully yours,

C. R. PETTIS,

Supt. State Forests

APPENDIX TO ANNUAL REPORT

OF

FORESTRY BUREAU

APPENDIX PART I

A FOREST SURVEY OF A PARCEL OF STATE LAND

INTRODUCTION

Any successful system of forest management must be based upon reliable and complete knowledge of the property. Such information can best be secured by what foresters term a "reconnaissance," or valuation survey. This means an examination of a sufficient percentage of the area, under average conditions, to enable the forester to prepare a report of the whole based upon such partial examination. This plan offers the most accurate, cheap and feasible plan to secure reliable data.

The information gained as a result of a valuation survey corresponds to the stock-taking or inventory of the business man or merchant. Timberland is the stock in trade of the operating forester. He cannot conduct his business along rational lines unless he knows what that stock in trade is. He cannot plan timber sales unless he knows how much timber he has to sell, and its location; or improvement cuttings, unless the condition of the forest is such as to warrant them; or reforesting operations, unless he knows the areas which require them; or securing financial assistance for operating the tract until he can produce proof to convince capital that he is able to offer adequate security.

A valuation survey is the first logical step to be taken before beginning to operate a tract of forest. Let us analyze what we obtain from it:

1. A written description of the land and timber on the tract which shows the various types and classes of timber.

2. Accompanying the written description a map which shows (a) the location of the different forest types, their area and the possible cut per acre; (b) the non-timbered areas, such as ponds, lakes, swamps, burns, etc., upon which may be indicated the portions needing reforesting; (c) and the topography including roads and streams, which when considered with the location of timbered areas and of markets enable the prospective operator to plan his work in advance and estimate closely the cost of each step in the work.

With the aid of an accurate topographic forest map log roads or railroads can be laid out, camps located, and the whole season's

work planned and its extent estimated, without the operator having to leave his office.

3. Stand tables and stock tables (see Tables 6 and 7) give a summary of the number of trees and the volume of wood per acre. These tables enable the operator to ascertain just how much timber he will secure by cutting to any given diameter limit, and at the same time just how much timber will be left to form the basis of the future crop. Stand tables taken with studies of the rate of growth of the different species of trees make it possible to learn how long it will be necessary to wait until a second cut can be had on a given area, and how much timber may be cut at that time.

The graduate students in the department of forestry, State College of Agriculture, at Cornell University, perform such field work as a part of their course of instruction. During the month of May, 1914, a reconnaissance survey and estimate of timber upon a certain part of the State Forest Preserve in the vicinity of Big Indian, Ulster county, New York, was made. The area examined comprised lot 3 of Division 2, and lots 1, 2, 3 and 4 of Division 3 of the Livingston tract which is a part of great lot 7 of the Hardenburgh patent. This tract lies in a solid body just north and west of the highway from Big Indian to Claryville in the town of Shandaken.

The area according to the published land list, is 4,173.86 acres, but in our work we used a strict horizontal survey which computed gave an area of 3,429.04 acres. This variation in area is largely due to the difference between surface and horizontal measurement. An examination of the map which shows irregularity of lines will explain other discrepancies.

The work was done by four students and one member of the forestry faculty. The first problem was the location of the property boundaries of the tract. Survey stations, to be used as bases for running strips, were established at intervals of ten chains apart as the boundary lines were being retraced. The plan of such a survey is to gridiron the area with strips usually one chain (66 ft.) in width upon which all trees which are to be taken are measured with calipers at breast-height (4½ feet from the ground).

First-Growth Hemlock

Corkscrew Falls

The work is done by four men working as a crew or unit. Two men are chaining and the other two are calipering, each caliper man covering the half of the strip on his side of the center where the chain lies. The head chainman has a compass and the front end of the chain is attached to the back of his belt. He runs the compass and produces a line from station to station. Such lines are parallel and the result is a succession of parallel lines across the area. The chainmen together measure distance and tally the chains. They also note topography, location of streams and roads, different types of growth and other items of value. The measurements made by the caliper men are called off by species and diameters and tallied by the rear chainman.

The north boundary of lot 1, Division 3, was run out and the southwest corner of the lot located. The line was continued to "Cone Rock," and this point also entered on the map. The town line between Shandaken and Denning has been a matter of contention. The State Engineer has, however, accepted the 1892 retracing of the Cockburn line of 1784 as constituting the boundary between the towns of Shandaken and Denning. Cone Rock is at the westerly end of the so-called Davis line of 1846, which has been proved to be no boundary of any property whatever. The town line was not traced for lack of time; two points on it were located, one at either end, and these connected by a straight line (see map).

From the survey stations strip estimates were run one-quarter of a mile (20 chains) apart, each strip being one chain wide. These strips crossed the main ridge being almost at right angles to the town line (bearing S. 30 degrees W. and N. 30 degrees E., respectively). All balsam fir and hemlocks seven inches and over in diameter at breast-height, and all hardwoods thirteen inches and over in diameter at breast-height, were calipered and recorded. The lines were run with a hand compass and distances measured with a 66-foot steel tape. Eighteen such strips were run, covering a total of 170.17 acres, about 5 per cent. of the total area of 3,429.04 acres. The acreage was kept distinct for the two types (see forest description) and for burns and cut-over areas. Alienated areas were not estimated. There were:

	Acres
In the slope type	1,730.48
In the ridge type	1,494.81
Burn (slope type)	131.57
Cut-over (slope type)	72.18
Total State land in tract	3,429.04

The actual estimating required two weeks, and an additional day was spent in taking height measurements. Altogether twenty days were spent in field work. If salaries had been paid the men would probably have received an average of $50 a month* and expenses. This is $1.66 per man per day, or a total of $166 for the five men. Allowing a liberal $1 per day per man for subsistence, etc., would have made the expenses total $100, a grand total of $266 for 3,429 acres surveyed, or 7.76 cents per acre. For a larger project, bigger crew and less rugged topography, the cost could easily be reduced to five cents an acre. The cost of the office work came to one cent an acre.

The data were worked up in Ithaca for greater convenience. The estimate sheets were tabulated separately for slope type and for ridge type, so as to get the total number of trees of each species and of each diameter. These totals, divided by the number of acres estimated in each type, gave a stand table, showing the number of trees of each species and diameter on an average acre for each type. (See tables 4 and 6 in forest description.)

In order to figure the volumes it was necessary to decide upon what volume table to use for each species, to prepare a height curve for the species and then to apply these heights to the chosen volume table by interpolation. For balsam fir Table 41, page 55 of United States Department of Agriculture Bulletin No. 55 was used. For hemlock of the smaller diameters, Table 6, page 118 of Forest Service Bulletin 36 was used, and for the larger diameters, Table 12, page 124 of the same bulletin.

For beech, birch, maple and the miscellaneous hardwoods, Tables 2, 5, 7 and 2 respectively on pages 114, 117, 119 and 114, respectively, of Bulletin 36 of the forest service, were used. For basswood and ash, it was necessary to adopt Table 29 of the forest

*One party chief at $1,600 per year; four assistants at $30 per month.

service, being a volume table for yellow poplar. The height and volume tables are given at the close of the forest description (Tables 8, 9, 10 and 11).

These volumes were then applied to the stand table showing the *number* of trees on an average acre of each type, resulting in a stock table which shows the *volume* for the average acre of each type and separately for each species and diameter. (See tables 5 and 7 in forest description.)

The following tables show how the final estimate for each type was computed based upon the stock table for volume and the area of the type as planimetered from the map.

TABLE 1.— FINAL ESTIMATE — SLOPE TYPE 1,730 ACRES

SPECIES	PER ACRE		Number acres in type (planimetered from map)	TOTAL VOLUME	
	Full volume board feet	Volume reduced 15 per cent for defect board feet		Board feet	Per cent of total volume
Balsam	14.51	12.33	1,730	21,321	.24
Hemlock	403.08	342.62	1,730	592,753	6.65
Beech	1,257.53	1,068.90	1,730	1,849,197	20.79
Birch	2,698.84	2,294.21	1,730	4,086,983	45.59
Maple	1,348.23	1,146.00	1,730	1,982,580	22.28
Ash	56.73	48.22	1,730	83,421	.94
Basswood	202.81	172.59	1,730	302,681	3.40
Miscellaneous	6.96	5.92	1,730	10,242	.11
Total	5,988.69	5,090.79	1,730	8,899,178	100.00

TABLE 2.— FINAL ESTIMATE — RIDGE TYPE 1,495 ACRES

SPECIES	PER ACRE		Number acres in type (planimetered from map)	TOTAL VOLUME	
	Full volume board feet	Volume reduced 30 per cent for defect board feet		Board feet	Per cent of total volume
Balsam	470.92	329.64	1,495	492,812	9.18
Hemlock	6.96	4.87	1,495	7,281	.13
Beech	216.21	151.35	1,495	226,268	4.22
Birch	3,730.96	2,611.67	1,495	3,904,447	72.90
Maple	620.82	434.57	1,495	649,682	12.18
Ash	.....	.....	1,495	.....	.....
Basswood	2.43	1.70	1,495	2,542	.04
Miscellaneous	69.15	48.41	1,495	72,373	1.35
Total	5,117.45	3,582.21	1,495	5,355,405	100.00

TABLE 3.— SUMMARY OF ESTIMATES (ALL TYPES)

Being the merchantable stand on 1,730.48 acres of the Slope Type and on 1,494.81 acres of the Ridge Type; a total of 3,235.29 acres. Based on Tables 1 and 2.

SPECIES	TOTAL VOLUME	
	Board feet	Per cent of total volume
Balsam	514,133	3.6
Hemlock	600,034	4.2
Beech	2,075,465	14.5
Birch	7,961,430	55.8
Maple	2,632,262	18.5
Ash	83,421	.6
Basswood	305,223	2.2
Miscellaneous hardwoods	82,615	.6
Total	14,254,583 ft. b. m.	100
Average per acre	4,406 ft. b. m.	

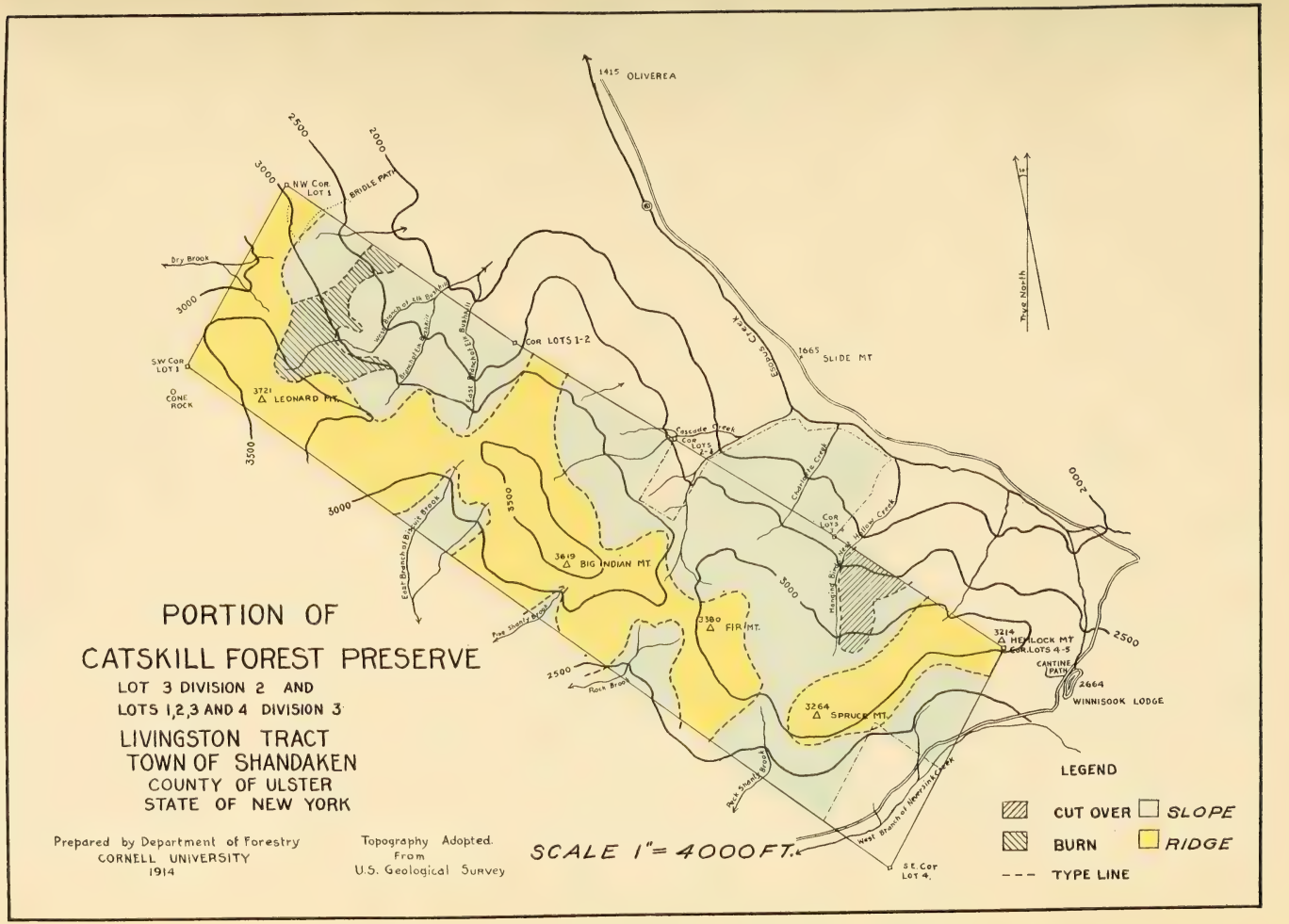
The necessity of such a tremendous deduction for defect is explained in the forest description.

The map, which accompanies this report, is based upon strictly horizontal measurements. Topography was adapted from the Phoenicia and Margaretville quadrangles of the United States Geological Survey. In future work of a similar nature, elevations could better be secured by means of aneroid barometers. The location and names of the chief peaks is somewhat different from that shown on the geological survey maps; a new name (Mt. Leonard) has been adopted to distinguish the high point of Big Indian mountain from the peak which is locally known as Big Indian.

All the original figures have been kept on file in the Department of Forestry at Cornell University, where access may be had to them at any time.

A. B. RECKNAGEL.

ITHACA, N. Y., *June,* 1914.



TYPE MAP OF AREA COVERED BY VALUATION SURVEY

FOREST DESCRIPTION

By B. H. Paul

The area covered by the estimate comprises lots 1, 2, 3 and 4 of division III and a parcel of lot 3 of division II, of the Livingston tract, in the township of Shandaken, Ulster county, N. Y., all in the southeastern portion of the Catskill mountains. The area is bounded as follows: On the north by lots 1, 2, 3 and 4 of Division II of the Livingston tract; on the east by lot 5 of Division III belonging to the Winnisook Lodge; on the south by the town of Denning; and on the west by the town of Hardenburgh. The total area, exclusive of alienations, is 3,429.04 acres.

The topography is generally rugged with comparatively little level land and many steep slopes. The height of the hills ranges from 1,000 to 2,000 feet above the streams in the valleys. The area is drained by the following streams: the Elk Bushkill, Cascade, and Hanging-birdsnest creeks, tributaries of the Esopus; Biscuit, Pine Shanty, Peck Shanty, and Rock creeks, tributaries of the west branch of the Neversink; and the headwaters of the east branch of Dry Brook. Neversink and Dry Brook are Delaware drainage. The Esopus drains into the Hudson, but is impounded at the Ashokan dam and constitutes the main source of water supply for New York city.

The slope ranges from medium to precipitous; the aspect on the north side of the ridge is mainly northeast and on the south side southwest.

The structure of the Catskill * mountains is simple. The strata lie almost flat, with slight dips to the west, northwest and southwest in various places. Shale commonly outcrops on the lower slopes of the valleys, but sandstones occur higher in the section, and on the summits of the principal peaks the rock is generally a conglomerate, very durable and thick. The flatness of the strata is expressed in the flat summits of the mountains, a characteristic feature and one that often interferes with the view. While the valleys among the mountains are broad and open, their sides are often cliffed to a notable extent for some distance. This is due to the system of almost vertical joints, which are the principal

* See Bowman. "Forest Physiography," pp. 691–692. John Wiley & Sons, New York city.

lines of weakness along which secondary erosion and valley widening take place. Abrupt ledges are frequent and are often a source of great difficulty in ascending a peak by unsual paths. To the vertical jointing and erosion along the joints is also to be attributed the successive steps which are common features of the valley floors and give rise to numerous picturesque cascades. (See Plate No. IV.)

Although the Catskills were overridden by pleistocene ice, signs of which are everywhere abundant, the ice appears not to have had any important effect upon the topography; rather, it conformed to the broad slopes, only slightly moulding them here and there by the deposition of small quantities of glacial till or by the erosion of the sharper forms.

The soil consists of a stony sheet of glacial till composed for the most part of a sandy loam. In the valleys and on the lower slopes it is of good depth, but becomes very shallow on the upper slopes and ridges. Places are to be seen where the surface of the ground is covered to a depth of several feet with large boulders, the only soil being a slight accumulation of decaying leaves and other debris. While in these places no water is ever found on the surface, it can often be heard running through the rocks a few feet below. Practically none of the land on the area described is of such a character that it could ever be used for agricultural purposes.

In the forest cover the following types have been recognized characterized by differences of topography and composition of the stand:

(1) The slope type comprises the area along the small streams and extends up the hillsides to the steeper slopes where a change to a certain extent in composition, but mainly in the form and height of the trees, becomes very marked. (See height tables for slope type and ridge type.)

The most noticeable change in composition is the dropping out of such species as basswood, white ash and hemlock as one begins to ascend the steeper slopes and the prescence of balsam fir and black cherry on the upper slopes and ridges.

The heaviest stands and best timber are necessarily found on the lower slopes where the deeper soil affords a more abundant supply of moisture and plant food elements. On the lower slopes

Second-Growth Forest — Slope Type

Ridge Type of Forest

in places where the original stand has at one time or another been removed, excellent stands of second growth hardwoods have sprung up. (See Plate III.) Although such stands cover only a small part of the area, they form a striking contrast with the overmature and decadent stands which cover the greater part of the area. (See Plate I.)

The original stand found on the slope type was composed of a mixture of hemlock and hardwoods. During the period of the hemlock bark industry in this region, most of the hemlock was cut, the bark peeled and drawn to market while the bodies of the trees, representing many thousands of board feet of timber, were left to decay in the forest. The massive trunks of many of these old specimens may be seen lying in the woods, now in the last stages of disintegration and decay. A few of these large hemlocks standing in the most inaccessible situations were left untouched (see Plate V), but their numbers were insufficient to furnish seed to fill up the blank spaces, and the faster growing hardwoods now occupy the area; that is, the stand now consists mainly of beech, birch and maple, the greater part of which is overmature and suffering from decay and which could be better replaced by a more thrifty second growth. (Compare Plates I and III.)

Conservative lumbering could well be practised on this type, since the character of the site is such that natural reproduction of the stand could be easily attained under silvicultural management. By so doing, this area could be made to produce valuable crops of timber, whereas, the present production is, in all probability, more than offset by decay of the overmature timber.

At present there is practically no reproduction of the stand in the slope type. The removal of the overmature and decadent trees would afford an opportunity for the beginning of a new crop. (Selection system.)

The forest floor is in good condition, plentifully supplied with litter and humus. Underbrush is not very abundant, being confined to such species as striped maple, mountain maple and witch-hobble.

The general distribution of the tree species found in this type is as follows: beech, birch and maple are about evenly distributed

throughout the type, but the larger trees are found in the moister situations where the soil is of superior quality. The ash and basswood is restricted to the deeper soils on the lower slopes and consists mainly of second growth which has come in since the removal of the hemlock from the original stand. The hemlock was formerly well distributed in this type, but now occurs only locally. Balsam fir and black cherry enter into the composition of this type to a very limited degree only. (See stand table 4.)

This type comprises merchantable area of 1,730.48 acres with an average stand of 81 trees per acre and an unreduced volume of about 6,000 board feet of merchantable material. There are within this type also 131.57 acres of unmerchantable burn and 72.18 acres of cut-over land, making the total area of the slope type 1,934.23 acres.

TABLE 4.— STAND TABLE

Slope Type — Average number trees per acre based upon 84.86 sample acres.

D. B. H.	Balsam	Hemlock	Beech	Birch	Maple	Ash	Basswood	Miscellaneous	Total
7	.35	.34	4.07	3.88	2.17	.60	.60	.78	12.79
8	.18	.31	3.75	2.95	1.62	.46	.44	.64	10.35
9	.06	.29	3.91	1.79	1.06	.54	.31	.36	8.32
10	.07	.31	4.13	1.51	1.07	.34	.29	.24	7.96
11	.06	.33	2.85	1.14	.90	.14	.17	.18	5.77
12	.01	.31	3.31	1.32	.75	.11	.17	.14	6.12
13	.....	.23	2.66	1.24	.74	.07	.18	.07	5.14
14	.....	.15	2.07	1.06	.72	.12	.12	.01	4.25
15	.....	.09	1.41	1.17	.63	.07	.08	.....	3.45
16	.....	.09	1.20	1.15	.61	.04	.12	.....	3.21
17	.....	.09	.67	1.13	.64	.05	.06	.....	2.64
18	.....	.07	.44	.94	.49	.02	.11	.....	2.07
19	.....	.04	.24	.69	.53	.01	.08	.....	1.59
20	.....	.02	.16	.67	.30	.....	.06	.....	1.21
21	.....	.04	.09	.61	.31	.01	.07	.....	1.13
22	.....	.04	.05	.55	.29	.02	.05	.....	1.00
23	.....	.05	.02	.47	.27	.....	.....	.....	.81
24	.....	.02	.01	.54	.22	.....	.01	.....	.80
25	.....	.02	.02	.44	.11	.....	.04	.....	.63
26	.....	.....	.....	.39	.09	.....	.....	.....	.48
27	.....	.02	.01	.21	.11	.....	.....	.....	.35
28	.....	.05	.....	.19	.07	.....	.....	.....	.31
29	.....	.....	.....	.09	.04	.....	.....	.....	.13
30	.....	.....	.....	.09	.02	.....	.01	.....	.12
31	.....	.01	.....	.11	.01	.....	.....	.....	.13
32	.....	.....	.....	.06	.03	.....	.....	.....	.09
33	.....	.....	.....	.04	.03	.....	.....	.....	.07
34	.....	.01	.....	.01	.01	.....	.....	.....	.03
35	.....	.....	.....	.04	.....	.....	.....	.....	.04
36	.....	.....	.....	.01	.....	.....	.....	.....	.01
37	.....	.....	.....	.....	.....	.....	.....	.....	.....
38	.....	.....	.....	.01	.....	.....	.....	.....	.01
39	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	.73	2.93	31.07	24.50	13.84	2.55	2.97	2.42	81.01
Per cent	.9	3.62	38.35	30.24	17.08	3.15	3.66	3.00	

Yellow Birch Thicket on Old Burn

Slope Type of Forest

TABLE 5.— STOCK TABLE

Slope Type — Average volume per acre based upon 84.86 acres, board feet.

D. B. H.	Balsam	Hemlock	Beech	Birch	Maple	Ash	Basswood	Miscellaneous	Total
7	4.55	6.80							11.35
8	3.78	6.41							10.19
9	1.74	12.18							13.92
10	2.73	17.98							20.71
11	1.06	24.09							25.15
12	.65	28.83							29.48
13		26.68	220.78	73.16	59.94	4.90	12.60	5.81	403.87
14		21.45	238.05	100.70	85.68	11.04	11.04	1.15	469.11
15		15.48	200.22	146.25	89.46	8.19	9.36		468.96
16		18.36	200.40	167.90	98.82	5.76	16.06		507.30
17		22.23	126.63	184.19	117.68	8.65	10.38		469.76
18		20.51	92.84	174.84	101.43	4.20	23.10		416.92
19		13.60	57.60	149.73	122.96	2.54	20.32		366.75
20		7.78	44.00	167.50	76.50		17.70		313.48
21		17.56	28.26	181.17	87.73	3.45	24.15		342.32
22		19.68	17.95	181.05	92.51	8.00	20.00		339.19
23		27.15	8.28	170.61	95.58				301.62
24		11.86	4.73	209.52	84.04		5.20		315.35
25		12.80	10.66	179.52	45.10		23.40		271.48
26				169.26	38.70				207.96
27		14.50	7.13	58.70	48.95				129.28
28		38.25		95.95	32.20				166.40
29				49.05	19.00				68.05
30				52.92	9.80		9.50		72.22
31		8.85		68.09	5.05				81.99
32				38.94	15.60				54.54
33				27.16	16.00				43.16
34		10.05		7.09	5.50				22.64
35				29.56					29.56
36				7.69					7.69
37									
38				8.29					8.29
39									
40									
Total	14.51	403.08	1,257.53	2,698.84	1,348.23	56.73	202.81	6.96	5,988.69
Per cent	.25	6.73	21.00	45.05	22.52	.95	3.38	.12	

The ridge type occupies the upper slopes and the tops of the mountains and ridges. This type is characterized by thin soils covering the upper slopes, which are usually very steep or precipitous, and the more or less flattened tops of the ridges. The balsam fir is well distributed throughout this type and, although this species constitutes a relatively small percentage of the stand, it at once becomes prominent because of its regular form and development which contrasts strongly with the short boles and irregular crowns of the hardwoods found here. (See Plate II.) Specimens of black cherry are frequent but they are of too poor form to be of any value. The remainder of the stand consists of about an equal distribution of beech, birch and maple, all of

which are in a very poor condition. Many of the trees are dead, especially of the beech and birch, thought to be the result of severe winter injury some ten or twelve years ago, leaving the stand in a very open condition.

As a result of the opening up of the stand a large number of herbaceous plants have come in (see Plate II), also some mountain maple and a considerable quantity of balsam fir reproduction now five to ten feet in height and well distributed throughout the whole type. If not interfered with, the balsam should in time fill the open spaces left by the dying out of the hardwoods, though it is not sufficiently tolerant to develop very rapidly in the more shaded places. Growth in this type is necessarily slow because of shallow soil, lack of moisture during the summer season and a high altitude, all of which contribute to the development of short and poorly formed trees.

The maintenance of forest cover upon this type is of importance primarily for the protection of water supplies and game. Its value for the protection of the watershed of Esopus creek cannot be too greatly emphasized because of the enormous amount of money recently expended by New York City in building a water supply reservoir upon that stream.

The general distribution of the trees in this type by volume and number is shown in the stand table and the stock table for the type (Tables 6 and 7). The type comprises a merchantable area of 1,494.81 acres with an average stand of 86 trees per acre and an unreduced volume of about 5,000 board feet of merchantable material.

TABLE 6.— STAND TABLE

Ridge Type — Average number trees per acre based on 79.91 acres.

D. B. H.	Balsam	Hemlock	Beech	Birch	Maple	Ash	Basswood	Miscellaneous	Total
7	3.13	.02	3.02	4.31	1.89	.....	.....	1.00	13.37
8	2.86	.....	3.32	3.89	1.44	.....	.....	.75	12.26
9	2.50	.01	2.77	3.19	1.14	.....	.....	.42	10.03
10	2.00	.01	1.93	3.45	.87	.....	.....	.30	8.56
11	1.16	.01	1.20	3.23	.86	.....	.....	.25	6.71
12	.95	.....	1.25	3.45	.89	.01	.....	.20	6.75
13	.40	.....	.66	3.47	.71	.....	.01	.14	5.39
14	.27	.01	.43	2.49	.56	.....	.....	.10	3.86
15	.17	.....	.30	2.27	.66	.....	.....	.12	3.52
16	.09	.....	.20	2.53	.45	.....	.....	.05	3.32

TABLE 6 — *Continued*

D. B. H.	Balsam	Hemlock	Beech	Birch	Maple	Ash	Basswood	Miscellaneous	Total
17	.04	.....	.15	2.25	.34	.....	.01	.05	2.84
18	.01	.....	.02	2.31	.24	.....	.....	.04	2.62
19	.01	.01	.01	1.05	.21	.....	.....	.....	1.29
20	.01	.....	.....	1.45	.16	.....	.....	.01	1.63
21	.....	.....	.02	.66	.15	.....	.....	.....	.83
22	.....	.....	.....	.67	.09	.....	.....	.....	.76
23	.....	.....	.....	.47	.05	.....	.....	.....	.52
24	.....	.....	.01	.50	.09	.....	.....	.....	.60
25	.....	.....	.....	.31	.01	.....	.....	.....	.32
26	.....	.....	.....	.21	.04	.....	.....	.....	.25
27	.....	.....	.....	.12	.....	.....	.....	.....	.12
28	.....	.....	.....	.07	.....	.....	.....	.....	.07
29	.....	.....	.....	.01	.01	.....	.....	.....	.02
30	.....	.....	.....	.07	.....	.....	.....	.....	.07
31	.....	.....	.....	.10	.....	.....	.....	.....	.10
32	.....	.....	.....	.07	.....	.....	.....	.....	.07
33	.....	.....	.....	.01	.....	.....	.....	.....	.01
34	.....	.....	.....	.01	.....	.....	.....	.....	.01
Total	13.60	.07	15.29	42.62	10.86	.01	.02	3.43	85.90
Per cent	15.82	.08	17.78	49.56	12.62	.013	.027	4.0	

TABLE 7.— STOCK TABLE

Ridge Type — Average volume per acre based upon 79.91 acres, board feet.

D. B. H.	Balsam	Hemlock	Beech	Birch	Maple	Ash	Basswood	Miscellaneous	Total
7	40.69	.40	.....	.....	.....	.....	.....	.....	41.09
8	60.06	.....	.....	.....	.....	.....	.....	.....	60.06
9	72.50	.42	.....	.....	.....	.....	.....	.....	72.92
10	78.00	.58	.....	.....	.....	.....	.....	.....	78.58
11	59.16	.73	.....	.....	.....	.....	.....	.....	59.89
12	62.75	.....	.....	.....	.....	.....	.....	.....	62.75
13	31.60	.....	54.78	204.73	57.51	.....	.70	11.62	360.94
14	26.11	1.43	49.45	236.55	56.64	.....	.....	11.50	391.68
15	18.36	.....	32.60	263.75	92.72	.....	.....	17.04	424.47
16	11.07	.....	33.40	369.38	72.90	.....	.....	8.35	495.10
17	5.52	.....	28.35	366.75	62.56	.....	1.73	9.45	474.36
18	1.54	.....	4.22	429.66	49.68	.....	.....	8.44	493.54
19	1.70	3.40	2.40	227.85	28.72	.....	.....	.....	264.07
20	1.86	.....	.....	362.50	40.80	.....	.....	2.75	407.91
21	.....	.....	6.28	205.92	42.45	.....	.....	.....	254.65
22	.....	.....	.....	221.77	28.71	.....	.....	.....	250.48
23	.....	.....	.....	170.61	17.70	.....	.....	.....	188.31
24	.....	.....	4.73	194.00	34.38	.....	.....	.....	233.11
25	.....	.....	.....	126.48	4.10	.....	.....	.....	130.58
26	.....	.....	.....	91.14	17.20	.....	.....	.....	108.34
27	.....	.....	.....	56.40	.....	.....	.....	.....	56.40
28	.....	.....	.....	35.35	.....	.....	.....	.....	35.35
29	.....	.....	.....	5.45	4.75	.....	.....	.....	10.20
30	.....	.....	.....	41.16	.....	.....	.....	.....	41.16
31	.....	.....	.....	61.90	.....	.....	.....	.....	61.90
32	.....	.....	.....	45.43	.....	.....	.....	.....	45.43
33	.....	.....	.....	6.79	.....	.....	.....	.....	6.79
34	.....	.....	.....	.....	.....	.....	.....	.....	.....
35	.....	.....	.....	7.39	.....	.....	.....	.....	7.39
36	.....	.....	.....	.....	.....	.....	.....	.....	.....
37	.....	.....	.....	.....	.....	.....	.....	.....	.....
38	.....	.....	.....	.....	.....	.....	.....	.....	.....
39	.....	.....	.....	.....	.....	.....	.....	.....	.....
40	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	470.92	6.96	215.21	3,730.96	620.82	.....	2.43	69.15	5,117.45
Per cent	9.18	.13	4.22	72.90	12.18	.....	.04	1.35	

On the northwest slope of Hemlock mountain there is within the slope type an area of 72.18 acres which has been heavily lumbered (See map). No attention was paid to natural regeneration of the stand and as a result the ground is now occupied by a rather dense growth of yellow birch, striped and mountain maples and pin cherry.

In addition to the cut-over area, there is quite a large amount of land which has been burned over by fires. This area is now covered with a thicket of yellow birch in the small pole and sapling stages, other species being almost entirely absent. While this form of cover will afford protection to the site, such a stand is not desirable from the silvicultural or commercial standpoint (See Plate VI). Within the slope type 131.57 acres of burn have been segregated as being entirely unmerchantable (See map).

There follow the volume and height tables for the principal species. (Table 8: Balsam Fir; Table 9: Hemlock; Table 10; Ash and Basswood; Table 11: Beech, Birch, Maple and Miscellaneous Hardwood Heights.)

TABLE 8.— VOLUME AND HEIGHT BALSAM FIR

Volumes based on table 41, U. S. Department of Agriculture Bulletin 55. Heights read from curve based on 53 trees.

Diameter breast-high (inches)	Total height (feet)	Volume (board feet)
7	35	13
8	38	21
9	40	29
10	42	39
11	44	51
12	46	65
13	48	79
14	49	93
15	50	108
16	50	123
17	51	138
18	52	154
19	52	170
20	52	186

TABLE 9.— VOLUME AND HEIGHT, HEMLOCK

Volumes based on tables 6 and 12, Forest Service Bulletin 36, Heights read from curve based on 13 trees.

Diameter breast-high inches	Height (feet)	Volume (board feet)
7	40	20
8	43	31
9	46	42
10	49	58
11	51	73
12	54	93
13	56	116
14	58	143
15	60	172
16	61	204
17	63	247
18	65	293
19	66	340
20	67	389
21	68	439
22	70	492
23	71	543
24	72	593
25	73	640
26	74	684
27	75	725
28	75	765
29	75	805
30	75	845

TABLE 10.— VOLUME AND HEIGHT, BASSWOOD AND ASH

Volumes based on table 29, Forest Service Bulletin 36. Heights read from curve based on 156 hardwoods of slope type.

Diameter breast-high (inches)	Height (feet)	Volume (board feet)
7	50	..
8	56	..
9	62	..
10	66	..
11	70	..
12	72	..
13	75	70
14	77	92
15	78	117
16	79	144
17	79	173
18	80	210
19	80	254
20	80	295
21	80	345
22	80	400
23	80	455
24	80	520
25	80	585
26	80	655
27	80	725
28	80	800
29	80	875
30	80	950

TABLE 11.—HARDWOOD HEIGHTS,* SLOPE AND RIDGE TYPES

Read from curves based on 156 trees for the slope type and 72 trees for the ridge type.

DIAMETER, BREAST-HIGH (*Inches*)	TOTAL HEIGHT IN FEET, BEECH, BIRCH, MAPLE AND MISCELLANEOUS HARDWOODS*	
	Slope type	Ridge type
7	40	30
8	45	33
9	48	35
10	52	38
11	55	40
12	57	41
13	59	42
14	60	43
15	62	44
16	63	44
17	64	45
18	65	45
19	66	46
20	67	46
21	67	46
22	68	47
23	68	47
24	69	47
25	70	48
26	70	48
27	70	48
28	70	..
29	70	..
30	70	..

* Excepting Basswood and Ash, for which see Table 10 preceding.

APPENDIX—PART II

REPORT UPON THE RESOURCES OF THE FOREST PRESERVE

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INTRODUCTION

The fact that the people of the State of New York are the owners of a vast forest area larger than the State of Delaware, but that on the other hand, they do not possess accurate information in regard to the forests thereon or the value of the property, is of striking significance. This Commission has during the past year attempted to examine the lands and compile data as to the resources of this great estate.

Creation.— This large tract of land commonly called the Forest Preserve is a result of several State laws. The beginning was made when a statute passed in 1883, prohibited the further sale of lands within certain counties situated in the Adirondack and Catskill regions. Two years later the Forest Preserve (including these lands) together with a Forest Commission, for administrative purposes, was created. The act of 1883 automatically withdrew from sale approximately 800,000 acres of land, the major portion of which had once been sold by the State, later partially lumbered, and permitted by the owners to revert to the State for non-payment of taxes. The Preserve has subsequently been increased by other sales for taxes, direct purchases, appropriation and through foreclosure of mortgages given by United States Loan Commissioners. The area now approximates 1,800,000 acres of both land and water.

Inventory.— There has never been a thorough examination of these lands in order to secure competent data as to the quantity of timber or other property thereon. In 1902* an examination was made to ascertain the general character of the lands alone. In 1908 data was compiled for the National Conservation Congress and it was then estimated that the total stumpage of the entire State was 46,060,000,000 ft. B. M. Other recent estimates placed the stumpage on State lands at approximately 12,000,000,000 ft. B. M. These are the only previous attempts to use figures as a measure of these materials.

The fact that the State is the owner of such a large property; that there has been much discussion by the people as to its use;

* See Eighth Annual Report of Forest, Fish and Game Commission.

and, furthermore, that the future management of these lands will be determined by the Constitutional Convention, made it a necessity that more accurate knowledge be secured. We, therefore, have made an attempt to procure and compile data of this character.

Method.— The absence of funds for the performance of this specific task necesitated that the work be done by our field force at times when fire conditions permitted and in connection with their other duties. The approximately seventy forest rangers were instructed last August to make reports upon all lands within their respective districts. A copy of the instructions sent and blanks used are found herein.

CONSERVATION COMMISSION

259.0

Albany, N. Y., August 26, 1914.

To Forest Rangers:

We require reliable information along the following lines in regard to the State Forest Preserve:

1. Amount and kinds of timber.
2. Value of the material.
3. Quantity of camp sites, and their location.
4. General description of the land and timber.

Your careful assistance is necessary in preparing this data. In order to secure uniform information, a blank has been prepared. We require a separate report upon each lot or lots situated together. Will you be careful in securing the information and preparation of your reports?

We require a report upon all state lands in your district. In preparing the report give attention to the following points:

1. Lot number, tract or patent, township, etc.
2. All facts in regard to lumbering operations on the parcel. State whether hard or soft wood was cut, or both. Approximate year of last lumbering. Size to which trees, generally, were cut on stumps.
3. Full report as to fires. Year they occurred. If light or severe burn.
4. If various parts of the lot are of different character, make separate or complete reports.
5. Make a diagram of lot and character of forest growth.
6. If the lot is covered with brush, give name of principal kinds of trees.
7. If land is open plains, marsh, blueberry plains, barren rock, water, so state.
8. If the lot contains a cut of timber, give best estimate of quantity and value as required.
9. The value required is the worth of the material on the stump.
10. Be sure to say if price is per thousand feet, cords, markets, standards, etc.
11. The matter of camp sites is important because there is the possibility of the Constitution being changed and permitting their leasing.
12. Give your estimate of what camp sites of one acre ought to lease for per year, these figures separate for different lakes and ponds.
13. If there is anything in these instructions which you do not fully understand, please write us at once.

This work is of great importance. It must be done carefully and conscientiously. A forester will be detailed to take charge of the matter and your work will be checked. We hope that you will be able to complete all your reports by October 1. We will expect you to send them to us, as fast as completed, every week.

We inclose blanks for your use. If you need additional supply advise us.

Very truly yours,

CONSERVATION COMMISSION,

By C. R. PETTIS,

Supt. State Forests.

INVENTORY OF STATE LAND

CONSERVATION COMMISSION
STATE OF NEW YORK

Report by.....

Date .....
Tract or patent.....
Twp. (or Great Lot).....
Lot .....
Town .....
County .....

History of past operations.....
.....
.....

History of fires.....
.....
.....

General character of parcel.....
.....
.....

Topography .....
.....
.....

Estimated miles of shores of lakes, ponds and large rivers.....
Miles of good camp sites.....
Annual rental value of camp sites $.....per year (camp site 1 acre)
Miles to nearest highway.....
Area bearing merchantable timber.....acres
Area bearing only trees too small to be merchantable.....acres
Area bearing no timber whatever (exclusive of water).....acres
Area in water.....acres
Total area.....acres
Remarks .....
.....
.....
.....
.....
.....
.....
.....
.....
.....

TIMBER ESTIMATE

Timbered area.....acres

SPECIES	Ft. B. M.; cords or markets	Stumpage value per unit of	Total value	Quality of timber
Spruce				
Pine				
Hemlock				
Balsam				
Cedar				
TOTAL SOFTWOODS				
Beech				
Birch				
Maple				
Cherry				
Ash				
Elm				
Oak				
Chestnut				
Poplar				
Basswood				
TOTAL HARDWOODS				
GRAND TOTAL				

Estimated average cost of logging on this parcel $.....per.....

NOTE.— In column (2) cross out units of measurement not used.

The rangers were, generally speaking, men who were experienced in lumbering and log scaling, and familiar with the tracts they were asked to examine. They examined these lands, interviewed competent people who were familiar with the lands and timber; secured knowledge of past operations; consulted maps showing the burned areas and otherwise secured important and helpful information. It must be borne in mind that this data is based upon ocular estimates of timber except in rare cases where more accurate figures were available, together with other reliable information. They incorporated the results of their work on the report blanks. These blanks were again checked by men familiar with the lands and the results compiled by a forester.† We do not claim that the figures are absolutely correct, but that they represent the best that could be done under the circumstances and will be very useful.

CLASSIFICATION

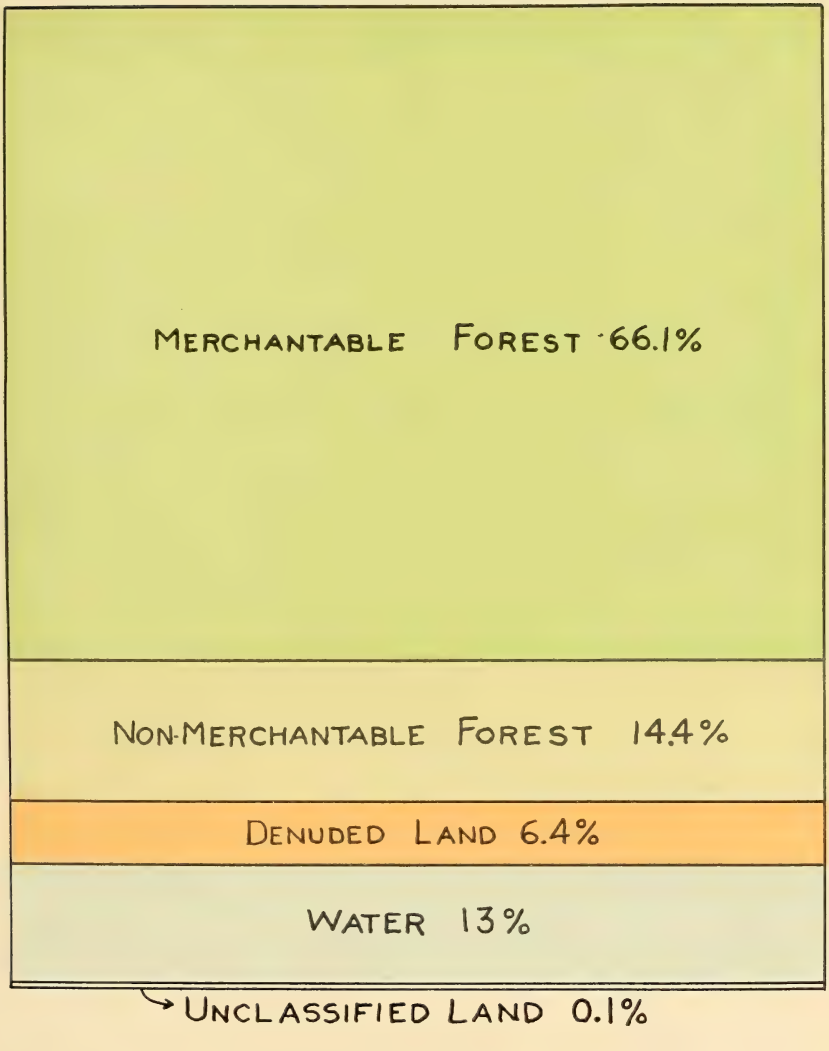
The information secured has been compiled in three ways. We have computed the area of lands of different character; the quantity of timber by species and location; and finally the extent of shore front suitable for camp sites.

The Preserves are situated in the Adirondack and Catskill regions; form parts of sixteen counties; consist of nearly seven thousand parcels; are bounded by approximately nine thousand miles of lines; and are intermixed with several times their area of private holdings. The area in its entirety is technically called the "Forest Preserve." The portions which lie within the Adirondack or Catskill counties are more particularly referred to as either the Adirondack or Catskill Preserve. There has been established by statute* in each of these sections a park which includes the more central portions of these territories. The park boundaries are indicated on our published maps by a heavy blue line. They include both State and private owned property. The idea of a park line has been to define an area within which the State should, as a matter of policy, confine its acquisition of lands

† The author wishes to acknowledge the services of Arthur S. Hopkins, a forester of this Commission, who carefully compiled data secured by the several rangers.

* Conservation Law, sections 51 and 52.

FOREST PRESERVE
COMPARATIVE AREAS
TOTAL
1,821,614.37 ACRES



for preserve purposes. This explanation is made for the reason that the sale of outside lands has been advocated by many and, therefore, our data has been compiled separately.

Area.— The definition of the Preserve (Sec. 50, Conservation Law) reads as follows:

"Sec. 50. Forest Preserve. The forest preserve shall include the lands owned or hereafter acquired by the State within the County of Clinton, except the towns of Altona and Dannemora, and the counties of Delaware, Essex, Franklin, Fulton, Hamilton, Herkimer, Lewis, Oneida, Saratoga, St. Lawrence, Warren, Washington, Greene, Ulster and Sullivan, except

1. Lands within the limits of any village or city, and

2. Lands not wild lands acquired by the State on foreclosure of mortgages made to loan commissioners."

There will be found on the following pages statistics and other data showing the character of these lands.

Timber.— We have also summarized the reports and prepared tables showing the quantity of merchantable timber by species and by counties, also according to location within and without the parks.

Camp Sites.— There are along our hundreds of lakes and ponds ideal camping places, and the advisability of leasing a portion of these areas has been discussed. Our study and tabulation includes this possible resource.

On account of the importance of these subjects they will be treated under the three divisions, viz.: Area, timber resources, and camp sites.

AREA

Description.— The statutory Preserve includes not only lands with forests, second growth and brush, but also denuded areas, marshes, and lands under water. The first purpose must be to consider the land from the standpoint of forest growth and adaptability. The classification has been taken as of two general groups, viz.: Timbered and non-timbered and then follows a further delineation of each group.

Tables.— Table I represents the summary of the data of all kinds in both Preserves and both within and outside the parks

Table II gives similar information for only the areas within the two parks. Table III includes the areas outside the two parks. It will be noticed that no parts of Clinton, Fulton, Lewis, Oneida or Washington counties lie within the parks, and that no portion of Hamilton county is without the Adirondack park. These figures show that 75 per cent. of the area within the parks, constituting 1,134,631 acres, contains merchantable timber, while 15 per cent. more (225,096 acres) is also forest-covered although the growth is not of merchantable size. It is, therefore, observed that 90 per cent. of the lands within the parks are forest covered. A further examination indicates that 3.5 per cent. is water and 6.5 per cent. is denuded.

TABLE I

LAND CLASSIFICATION, FOREST PRESERVE

Entire Area

COUNTY	TIMBERED		NON-TIMBERED		Unclassified	Total
	Merchantable	Non-merchantable	Denuded	Water		
			ADIRONDACK			
	Acres	*Acres*	*Acres*	*Acres*		*Acres*
Clinton	6,337.83	4,004.28	3,330.66	37,850.00	145.81	51,668.58
Essex	167,327.54	105,978.25	31,178.26	58,591.30	.....	363,075.35
Franklin	89,957.57	35,640.35	32,362.51	12,690.80	.....	170,651.23
Fulton	19,787.25	1,462.92	1,503.10	521.58	.....	23,274.85
Hamilton	542,942.33	32,492.88	23,711.32	22,364.42	.....	621,510.95
Herkimer	171,729.91	16,316.73	632.87	7,632.13	.....	196,311.64
Lewis	1,380.32	2,201.43	1,119.63	15.00	.....	4,716.38
Oneida	2,193.00	1,979.04	1,173.02	23,294.00	.....	28,639.06
St. Lawrence	19,244.91	12,265.30	8,421.54	40,695.07	.....	80,626.82
Saratoga	7,272.00	1,949.94	846.60	2.00	.....	10,070.54
Warren	95,441.13	21,480.52	8,066.98	30,161.69	.....	155,150.32
Washington	670.00	1,095.00	378.00	2,177.00	.....	4,320.00
Total	1,124,283.79	236,866.64	112,724.49	235,994.99	145.81	1,710,015.72
			CATSKILL			
Delaware	10,150.75	1,860.36	1,077.00	.....	162.00	13,250.11
Greene	4,789.22	7,845.54	622.50	2.00	36.00	13,295.26
Sullivan	.....	823.60	219.95	.....	.....	1,043.55
Ulster	65,314.33	16,130.65	1,114.60	121.50	1,328.65	84,009.73
Total	80,254.30	26,660.15	3,034.05	123.50	1,526.65	111,598.65
			SUMMARY			
Adirondack	1,124,283.79	236,866.64	112,724.49	235,994.99	145.81	1,710,015.72
Catskill	80,254.30	26,660.15	3,034.05	123.50	1,526.65	111,598.65
Grand total	1,204,538.09	263,526.79	115,758.54	236,118.49	1,672.46	1,821,614.37

FOREST PRESERVE
COMPARATIVE AREAS
LANDS OUTSIDE PARKS
313,277.37 ACRES

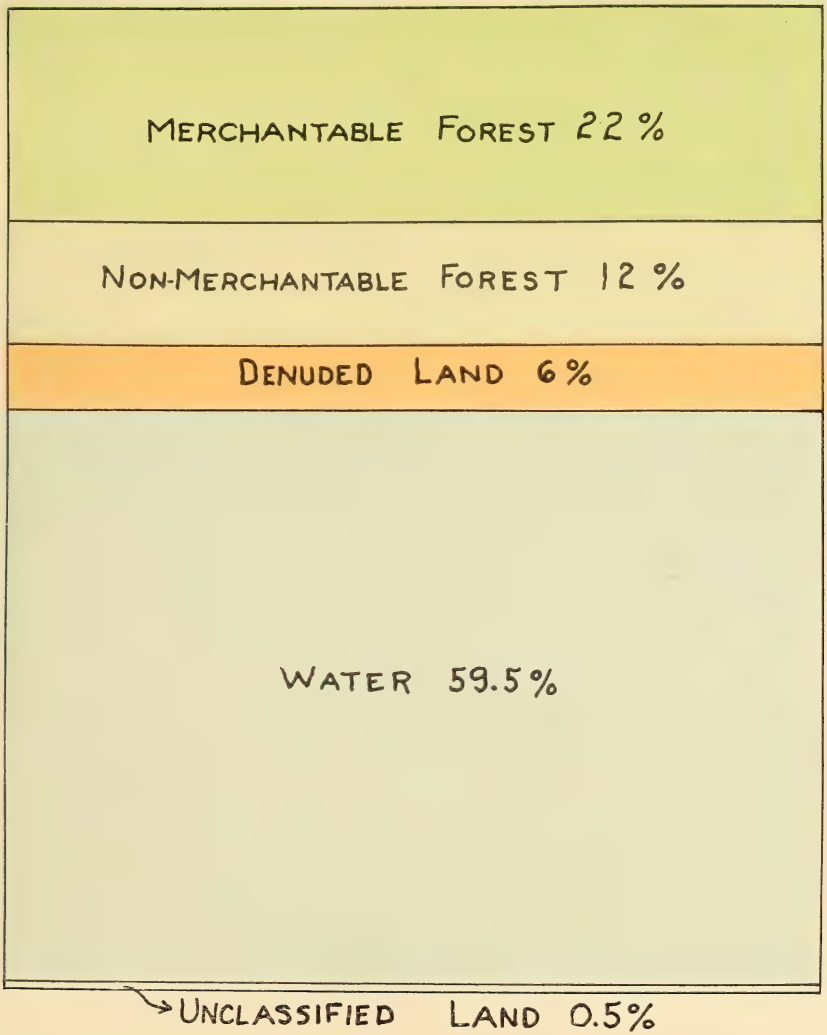


TABLE II

LAND CLASSIFICATION, FOREST PRESERVE

Within Parks

COUNTY	TIMBERED		NON-TIMBERED		Unclassified	Total
	Merchantable	Non-merchantable	Denuded	Water		
			ADIRONDACK			
	Acres	*Acres*	*Acres*	*Acres*		*Acres*
Essex	164,232.59	97,889.55	29,723.13	2,432.00	.....	244,277.27
Franklin	82,555.57	33,495.35	26,842.00	11,676.80	.....	154,569.72
Hamilton	542,942.33	32,492.88	23,711.32	22,364.42	.....	621,510.95
Herkimer	165,766.40	16,014.66	570.65	7,632.13	.....	189,983.84
St. Lawrence	18,730.91	10,278.00	7,198.58	6,695.07	.....	42,902.56
Saratoga	1,860.00	37.00	472.00	.....	.....	2,369.00
Warren	82,482.20	11,539.25	5,794.88	1,469.69	.....	101,286.02
Total	1,058,570.00	201,746.69	94,312.56	52,270.11	.....	1,406,899.36
			CATSKILL			
Delaware	6,226.50	749.00	56.00	.....	.....	7,031.50
Greene	4,789.22	7,845.54	622.50	2.00	36.00	13,295.26
Sullivan	.....	57.00	57.00	.....	.....	114.00
Ulster	65,045.38	14,697.40	1,077.85	121.50	54.75	80,996.88
Total	76,061.10	23,348.94	1,813.35	123.50	90.75	101,437.64
			SUMMARY			
Adirondack	1,058,570.00	201,746.69	94,312.56	52,270.11	.....	1,406,899.36
Catskill	76,061.10	23,348.94	1,813.35	123.50	90.75	101,437.64
Grand total	1,134,631.10	225,095.63	96,125.91	52,393.61	90.75	1,508,337.00

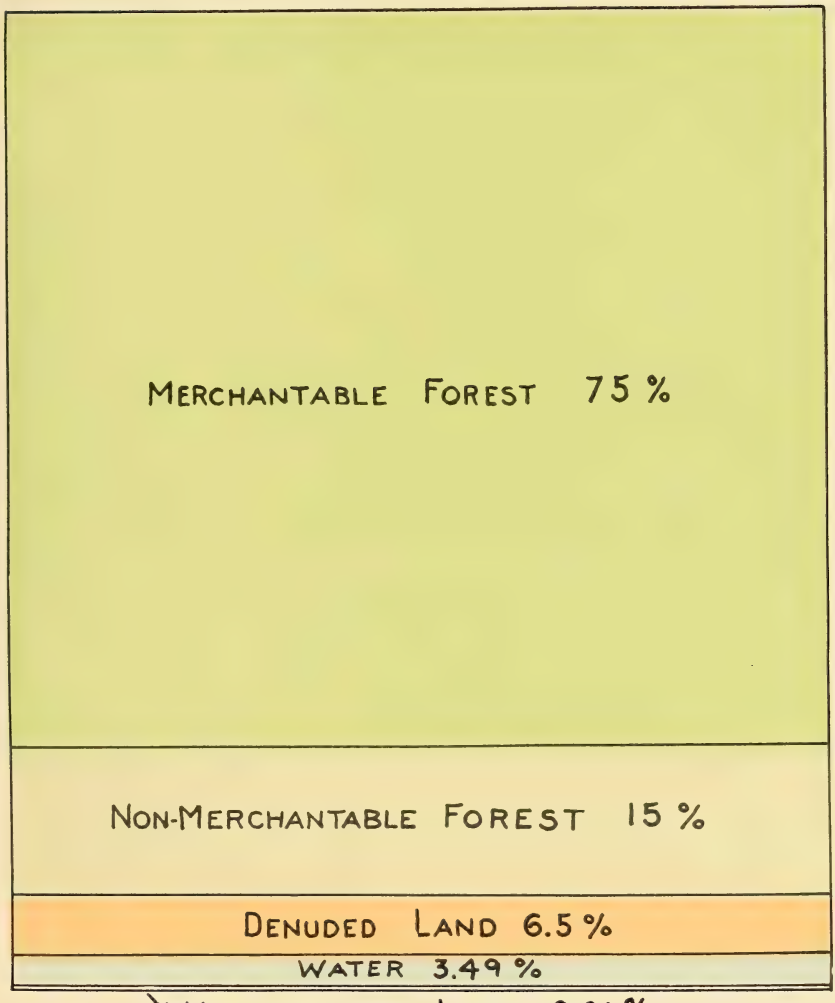
TABLE III

LAND CLASSIFICATION, FOREST PRESERVE

Outside Parks

COUNTY	TIMBERED		NON-TIMBERED		Unclassified	Total
	Merchantable	Non-merchantable	Denuded	Water		
			ADIRONDACK			
	Acres	*Acres*	*Acres*	*Acres*		*Acres*
Clinton	6,337.83	4,004.28	3,330.66	37,850.00	145.81	51,668.58
Essex	3,094.95	8,088.70	1,455.13	56,159.30	.....	68,798.08
Franklin	7,402.00	2,145.00	5,520.51	1,014.00	.....	16,081.51
Fulton	19,787.25	1,462.92	1,503.10	521.58	.....	23,274.85
Herkimer	5,963.51	302.07	62.22	.....	.....	6,327.80
Lewis	1,380.32	2,201.43	1,119.63	15.00	.....	4,716.38
Oneida	2,193.00	1,979.04	1,173.02	23,294.00	.....	28,639.06
St. Lawrence	514.00	1,987.30	1,222.96	34,000.00	.....	37,724.26
Saratoga	5,412.00	1,912.94	374.60	2.00	.....	7,701.54
Warren	12,958.93	9,941.27	2,272.10	28,692.00	.....	53,864.30
Washington	670.00	1,095.00	378.00	2,177.00	.....	4,320.00
Total	65,713.79	35,119.95	18,411.93	183,724.88	145.81	303,116.36
			CATSKILL			
Delaware	3,924.25	1,111.36	1,021.00	.....	162.00	6,218.61
Sullivan	.....	766.60	162.95	.....	.....	929.55
Ulster	268.95	1,433.25	36.75	.....	1,273.90	3,012.85
Total	4,193.20	3,311.21	1,220.70	.....	1,435.90	10,161.01
			SUMMARY			
Adirondack	65,713.79	35,119.95	18,411.93	183,724.88	145.81	303,116.36
Catskill	4,193.20	3,311.21	1,220.70	.....	1,435.90	10,161.01
Grand total	69,906.99	38,431.16	19,632.63	183,724.88	1,581.71	313,277.37

FOREST PRESERVE
COMPARATIVE AREAS
ADIRONDACK AND CATSKILL PARKS
1,508,337. ACRES



The figures taken as a whole show a total area of 1,821,614.37 acres divided as follows:

Merchantable forest	1,204,538 acres	66.1%
Non-merchantable forest	263,527 acres	14.4%
Denuded areas	115,759 acres	06.4%
Water	236,118 acres	13. %
Unclassified	1,672 acres	00.1%

They further show that 313,277 acres are not contained in either park, and that of this area 69,907 acres have merchantable timber, 38,431 acres have non-merchantable timber; 19,633 acres are denuded; 183,725 acres are water, with 1,582 acres additional unclassified.

The total water area 236,118 acres includes 183,725 acres outside of the Adirondack park, while all of the remainder, except 123 acres, lies within the Adirondack park. The large area outside includes lands under water in Lake Champlain, Lake George, St. Lawrence and Hudson rivers. The 52,270 acres of water within the Adirondack park are the beds of many lakes and ponds.

The lands outside the two parks are by no means valueless. The tables show that 55 per cent. of the Adirondack land and 41 per cent. of such Catskill areas supports merchantable timber. There are instances where such lands are very valuable and should be used for agriculture.

Types.— It would have been desirable to submit information showing the extent and location of forests according to their character and composition. Such data is very useful and would be helpful in formulating a forest policy. Maps, which show the location of areas according to forest composition, are called "type maps." They could not be attempted on account of the insufficiency of funds.

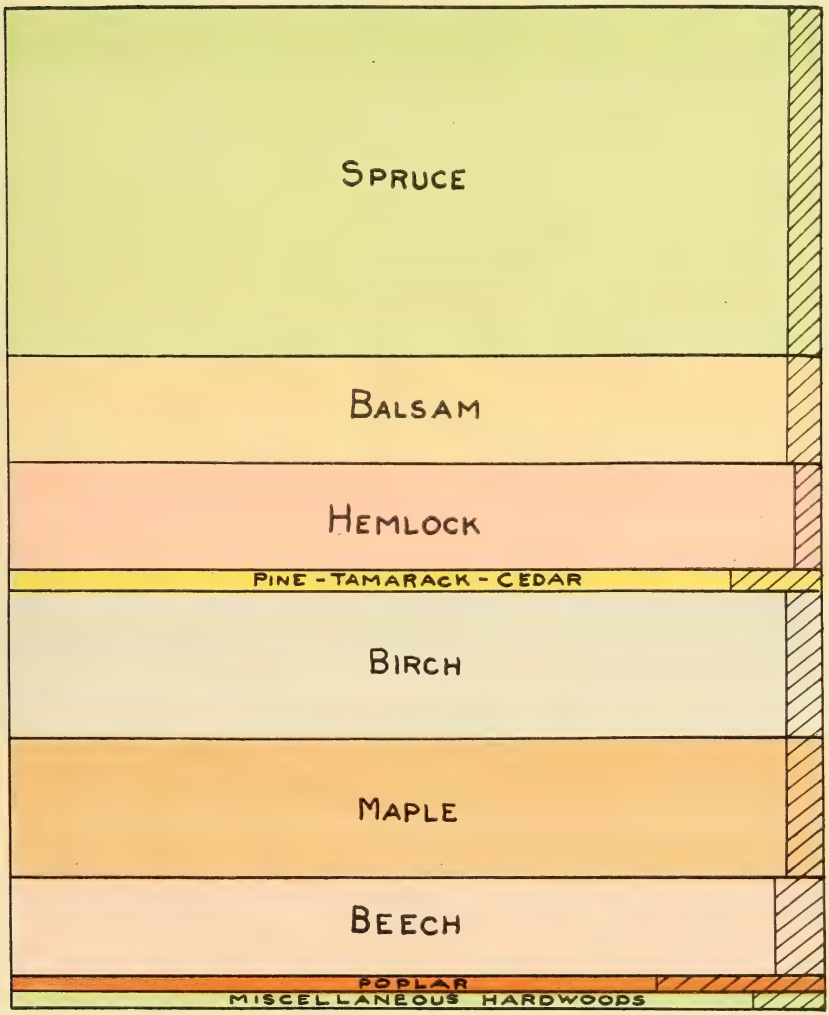
TIMBER RESOURCES

The amount, kinds and quality of timber found upon these lands will be of particular interest to some, and of general interest to all. These facts, together with the cost of lumbering,

determine the value of this State property. There are so many factors affecting value that we have not attempted to make an appraisal but have limited our efforts to ascertaining the quantity of each kind of lumber.

Tables.— The accompanying tables IV–XX show totals for all species, separate summary for hard and soft woods, together with itemized reports by species for each county. The figures are further classified and indicate stumpage inside and outside of parks.

Comparative Quantity of Timber on Forest Preserve



▨ Shows quantity outside the Parks

TABLE IV.—SUMMARY OF STUMPAGE, BY COUNTIES AND SPECIES, M BOARD FEET

TOTAL FOREST PRESERVE

COUNTY	SPECIES													GRAND TOTAL
	Spruce	Balsam	Hemlock	Pine	Cedar	Tamarack	Total softwoods	Beech	Birch	Maple	Poplar	Miscellaneous hardwoods	Total hardwoods	
Clinton	2,461	507	500	450	63	.....	3,981	.....	42	101	3,069	8	3,220	7,201
Essex	301,768	80,367	51,228	2,694	1,005	232	437,294	63,211	72,704	75,156	29,743	1,639	242,453	679,747
Franklin	213,861	115,931	111,832	6,376	750	.....	448,750	158,707	210,997	203,847	796	1,008	575,355	1,024,105
Fulton	15,670	9,931	12,809	85	.....	.....	38,495	18,014	10,874	10,775	2,747	2,204	44,614	83,109
Hamilton	1,609,701	498,980	520,965	41,571	6,957	.....	2,678,174	383,942	684,925	562,493	6,519	58,536	1,696,415	4,374,589
Herkimer	486,150	124,542	119,541	59	.....	199	730,491	70,414	180,735	95,870	.....	3,660	350,679	1,081,170
Lewis	3,509	433	1,083	52	8	.....	5,085	385	165	361	15	10	936	6,021
Oneida	7,716	116	357	.....	.....	.....	8,189	476	2,000	357	.....	.....	2,833	11,022
St. Lawrence	31,718	8,559	16,256	6,850	10,060	.....	73,443	15,199	11,908	19,740	10	.....	46,857	120,300
Saratoga	20,919	2,801	6,058	3,295	.....	.....	33,073	11,948	10,725	10,470	5,441	4,274	42,858	75,931
Warren	86,746	58,083	35,850	11,506	.....	.....	192,185	41,971	28,061	78,573	26,680	11,402	186,687	378,872
Washington	110	.....	97	135	.....	.....	342	52	45	70	123	12	302	644
Delaware	.....	.....	1,030	215	.....	.....	1,245	2,785	2,175	5,910	.....	2,752	13,622	14,867
Greene	1,726	.....	1,201	.....	.....	.....	2,927	372	600	891	200	264	2,327	5,254
Ulster	30,629	1,684	4,252	118	.....	.....	36,683	21,624	40,596	34,072	16,032	5,375	117,699	154,382
Total Adirondacks	2,780,329	900,250	876,576	73,073	18,843	431	4,649,502	764,319	213,181	1,057,813	75,143	82,753	3,193,209	7,842,711
Total Catskills	32,355	1,684	6,483	333	.....	.....	40,855	24,781	43,371	40,873	16,232	8,391	133,648	174,503
Grand total	2,812,684	901,934	883,059	73,406	18,843	431	4,690,357	789,100	256,552	1,098,686	91,375	91,144	3,326,857	8,017,214

TABLE V.— SUMMARY OF STUMPAGE, BY COUNTIES AND SPECIES, M BOARD FEET WITHIN PARKS

COUNTY	SPECIES													Grand total
	Spruce	Balsam	Hemlock	Pine	Cedar	Tamarack	Total softwoods	Beech	Birch	Maple	Poplar	Miscellaneous hardwoods	Total hardwoods	
Essex	299,278	80,367	50,838	2,134	1,005	232	433,854	63,189	72,360	75,124	27,699	1,602	239,974	673,828
Franklin	190,235	99,921	109,507	6,204	750	.....	406,617	152,850	203,868	197,262	796	8	554,784	961,401
Hamilton	1,609,701	498,980	520,965	41,571	6,957	.....	2,678,174	383,942	684,925	562,493	6,519	58,536	1,696,415	374,589
Herkimer	469,021	122,215	113,821	59	.....	199	705,315	64,754	163,734	84,520	.....	3,660	316,668	021,983
St. Lawrence	31,253	8,001	16,241	6,772	10,010	.....	72,277	15,019	11,755	19,448	.....	.....	46,222	118,499
Saratoga	2,700	793	1,640	1,000	.....	.....	6,133	2,460	1,860	3,440	2,040	1,990	11,790	17,923
Warren	82,251	57,506	33,930	5,652	.....	.....	179,339	38,336	26,600	74,841	19,558	10,400	169,735	349,074
Delaware	.....	.....	245	.....	.....	.....	245	1,935	1,595	4,825	.....	1,148	9,503	9,748
Greene	1,726	.....	1,201	.....	.....	.....	2,927	372	600	891	200	264	2,327	5,254
Ulster	30,629	1,684	4,248	.....	.....	.....	36,561	21,624	40,596	34,072	16,032	5,375	117,699	203,032
Total Adirondacks	2,684,439	867,783	846,942	63,392	18,722	431	4,481,709	720,550	1,165,102	1,017,128	56,612	76,196	3,035,588	7,517,297
Total Catskills	32,355	1,684	5,694	.....	.....	.....	39,733	23,931	42,791	39,788	16,232	6,787	129,529	169,262
Grand total	2,716,794	869,467	852,636	63,392	18,722	431	4,521,442	744,481	1,207,893	1,056,916	72,844	82,983	3,165,117	7,686,559

TABLE VI.—SUMMARY OF STUMPAGE, BY COUNTIES AND SPECIES, M BOARD FEET

OUTSIDE PARKS

COUNTY	SPECIES												GRAND TOTAL
	Spruce	Balsam	Hemlock	Pine	Cedar	Total softwoods	Beech	Birch	Maple	Poplar	Miscellaneous hardwoods	Total hardwoods	
Clinton	2,461	507	500	450	63	3,981	.....	42	101	3,069	8	3,220	7,201
Essex	2,490	.....	390	560	.....	3,440	22	344	32	2,044	37	2,479	5,919
Franklin	23,626	16,010	2,325	172	.....	42,133	5,857	7,129	6,585	.....	1,000	20,571	62,704
Fulton	15,670	9,931	12,809	85	.....	38,495	18,014	10,874	10,775	2,747	2,204	44,614	83,109
Herkimer	17,129	2,327	5,720	.....	.....	25,176	5,660	17,001	11,350	.....	.....	34,011	59,187
Lewis	3,509	433	1,083	52	8	5,085	385	165	361	15	10	936	6,021
Oneida	7,716	116	357	.....	.....	8,189	476	2,000	357	.....	.....	2,833	11,022
St. Lawrence	465	558	15	78	50	1,166	180	153	292	10	.....	635	1,801
Saratoga	18,219	2,008	4,418	2,295	.....	26,940	9,488	8,865	7,030	3,401	2,284	31,068	58,008
Warren	4,495	577	1,920	5,854	.....	12,846	3,635	1,461	3,732	7,122	1,002	16,952	29,798
Washington	110	.....	97	135	.....	342	52	45	70	123	12	302	644
Delaware	.....	.....	785	215	.....	1,000	850	580	1,085	.....	1,604	4,119	5,119
Ulster	.....	.....	4	118	.....	122	.....	.....	.....	.....	.....	.....	122
Total Adirondacks	95,890	32,467	29,634	9,681	121	167,793	43,769	48,079	40,685	18,531	6,557	157,621	325,414
Total Catskills	.....	.....	789	333	.....	1,122	850	580	1,085	.....	1,604	4,119	5,241
Grand total	95,890	32,467	30,423	10,014	121	168,915	44,619	48,659	41,770	18,531	8,161	161,740	330,655

TABLE VII.— TOTAL SOFTWOOD STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	3,981	3,981
Essex	433,854	3,440	437,294
Franklin	406,617	42,133	448,750
Fulton	.....	38,495	38,495
Hamilton	2,678,174	.....	2,678,174
Herkimer	705,315	25,176	730,491
Lewis	.....	5,085	5,085
Oneida	.....	8,189	8,189
St. Lawrence	72,277	1,166	73,443
Saratoga	6,133	26,940	33,073
Warren	179,339	12,846	192,185
Washington	.....	342	342
Delaware	245	1,000	1,245
Greene	2,927	.....	2,927
Ulster	36,561	122	36,683
Total Adirondacks	4,481,709	167,793	4,649,502
Total Catskills	39,733	1,122	40,855
Grand total	4,521,442	168,915	4,690,357

TABLE VIII.— TOTAL HARDWOOD STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	3,220	3,220
Essex	239,974	2,479	242,453
Franklin	554,784	20,571	575,355
Fulton	.....	44,614	44,614
Hamilton	1,696,415	.....	1,696,415
Herkimer	316,668	34,011	350,679
Lewis	.....	936	936
Oneida	.....	2,833	2,833
St. Lawrence	46,222	635	46,857
Saratoga	11,790	31,068	42,858
Warren	169,735	16,952	186,687
Washington	.....	302	302
Delaware	9,503	4,119	13,622
Greene	2,327	.....	2,327
Ulster	117,699	.....	117,699
Total Adirondacks	3,035,588	157,621	3,193,209
Total Catskills	129,529	4,119	133,648
Grand total	3,165,117	161,740	3,326,857

TABLE IX.— TOTAL STUMPAGE, ALL SPECIES, M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	7,201	7,201
Essex	673,828	5,919	679,747
Franklin	961,481	62,704	1,024,105
Fulton	.....	83,109	83,109
Hamilton	4,374,589	.....	4,374,589
Herkimer	1,021,983	59,187	1,081,170
Lewis	.....	6,021	6,021
Oneida	.....	11,022	11,022
St. Lawrence	118,499	1,801	120,300
Saratoga	17,923	58,008	75,931
Warren	349,074	29,798	378,872
Washington	.....	644	644
Delaware	9,748	5,119	14,867
Greene	5,254	.....	5,254
Ulster	154,260	122	154,382
Total Adirondacks	7,517,297	325,414	7,842,711
Total Catskills	169,262	5,241	174,503
Grand total	7,686,559	330,655	8,017,214

TABLE X.— SPRUCE STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	2,461	2,461
Essex	299,278	2,490	301,768
Franklin	190,235	23,626	213,861
Fulton	.....	15,670	15,670
Hamilton	1,609,701	.....	1,609,701
Herkimer	469,021	17,129	486,150
Lewis	.....	3,509	3,509
Oneida	.....	7,716	7,716
St. Lawrence	31,253	465	31,718
Saratoga	2,700	18,219	20,919
Warren	82,251	4,495	86,746
Washington	.....	110	110
Greene	1,726	.....	1,726
Ulster	30,629	.....	30,629
Total Adirondacks	2,684,439	95,890	2,780,329
Total Catskills	32,355	.....	32,355
Grand total	2,716,794	95,890	2,812,684

TABLE XI.— BALSAM STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	507	507
Essex	80,367	.....	80,367
Franklin	99,921	16,010	115,931
Fulton	.....	9,931	9,931
Hamilton	498,980	.....	498,980
Herkimer	122,215	2,327	124,542
Lewis	.....	433	433
Oneida	.....	116	116
St. Lawrence	8,001	558	8,559
Saratoga	793	2,008	2,801
Warren	57,506	577	58,083
Ulster	1,684	.....	1,684
Total Adirondacks	867,783	32,467	900,250
Total Catskills	1,684	.....	1,684
Grand total	869,467	32,467	901,934

TABLE XII.— HEMLOCK STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	500	500
Essex	50,838	390	51,228
Franklin	109,507	2,325	111,832
Fulton	.....	12,809	12,809
Hamilton	520,965	.....	520,965
Herkimer	113,821	5,720	119,541
Lewis	.....	1,083	1,083
Oneida	.....	357	357
St. Lawrence	16,241	15	16,256
Saratoga	1,640	4,418	6,058
Warren	33,930	1,920	35,850
Washington	.....	97	97
Delaware	245	785	1,030
Greene	1,201	.....	1,201
Ulster	4,248	4	4,252
Total Adirondacks	846,942	29,634	876,576
Total Catskills	5,694	789	6,483
Grand total	852,636	30,423	883,059

TABLE XIII.— PINE STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	450	450
Essex	2,134	560	2,694
Franklin	6,204	172	6,376
Fulton	.....	85	85
Hamilton	41,571	.....	41,571
Herkimer	59	.....	59
Lewis	.....	52	52
St. Lawrence	6,772	78	6,850
Saratoga	1,000	2,295	3,295
Warren	5,652	5,854	11,506
Washington	.....	135	135
Delaware	.....	215	215
Ulster	.....	118	118
Total Adirondacks	63,392	9,681	73,073
Total Catskills	.....	333	333
Grand total	63,392	10,014	73,406

TABLE XIV.— CEDAR STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	63	63
Essex	1,005	.....	1,005
Franklin	750	.....	750
Hamilton	6,957	.....	6,957
Lewis	.....	8	8
St. Lawrence	10,010	50	10,060
Total	18,722	121	18,843

TABLE XV. — TAMARACK STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Essex	232	.....	232
Herkimer	199	.....	199
Total	431	.....	431

TABLE XVI.— BEECH STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Essex	63,189	22	63,211
Franklin	152,850	5,857	158,707
Fulton	.....	18,014	18,014
Hamilton	383,942	.....	383,942
Herkimer	64,754	5,660	70,414
Lewis	.....	385	385
Oneida	.....	476	476
St. Lawrence	15,019	180	15,199
Saratoga	2,460	9,488	11,948
Warren	38,336	3,635	41,971
Washington	.....	52	52
Delaware	1,935	850	2,785
Greene	372	.....	372
Ulster	21,624	.....	21,624
Total Adirondacks	720,550	43,769	764,319
Total Catskills	23,931	850	24,781
Grand total	744,481	44,619	789,100

TABLE XVII.— BIRCH STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	42	42
Essex	72,360	344	72,704
Franklin	203,868	7,129	210,997
Fulton	.....	10,874	10,874
Hamilton	684,925	.....	684,925
Herkimer	163,734	17,001	180,735
Lewis	.....	165	165
Oneida	.....	2,000	2,000
St. Lawrence	11,755	153	11,908
Saratoga	1,860	8,865	10,725
Warren	26,600	1,461	28,061
Washington	.....	45	45
Delaware	1,595	580	2,175
Greene	600	.....	600
Ulster	40,596	.....	40,596
Total Adirondacks	1,165,102	48,079	1,213,181
Total Catskills	42,791	580	43,371
Grand total	1,207,893	48,659	1,256,552

TABLE XVIII.— MAPLE STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	101	101
Essex	75,124	32	75,156
Franklin	197,262	6,585	203,847
Fulton	.....	10,775	10,775
Hamilton	562,493	.....	562,493
Herkimer	84,520	11,350	95,870
Lewis	.....	361	361
Oneida	.....	357	357
St. Lawrence	19,448	292	19,740
Saratoga	3,440	7,030	10,470
Warren	74,481	3,732	78,573
Washington	.....	70	70
Delaware	4,825	1,085	5,910
Greene	891	.....	891
Ulster	34,072	.....	34,072
Total Adirondacks	1,017,128	40,685	1,057,813
Total Catskills	39,788	1,085	40,873
Grand total	1,056,916	41,770	1,098,686

TABLE XIX.— POPLAR STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	3,069	3,069
Essex	27,699	2,044	29,743
Franklin	796	.....	796
Fulton	.....	2,747	2,747
Hamilton	6,519	.....	6,519
Lewis	.....	15	15
St. Lawrence	.....	10	10
Saratoga	2,040	3,401	5,441
Warren	19,558	7,122	26,680
Washington	.....	123	123
Greene	200	.....	200
Ulster	16,032	.....	16,032
Total Adirondacks	56,612	18,531	75,143
Total Catskills	16,232	.....	16,232
Grand total	72,844	18,531	91,375

TABLE XX.— MISCELLANEOUS HARDWOODS STUMPAGE M BD. FT.

COUNTY	Within park	Outside park	Total
Clinton	.....	8	8
Essex	1,602	37	1,639
Franklin	8	1,000	1,008
Fulton	.....	2,204	2,204
Hamilton	58,536	.....	58,536
Herkimer	3,660	.....	3,660
Lewis	.....	10	10
Saratoga	1,990	2,284	4,274
Warren	10,400	1,002	11,402
Washington	.....	12	12
Delaware	1,148	1,604	2,752
Greene	264	.....	264
Ulster	5,375	.....	5,375
Total Adirondacks	76,196	6,557	82,753
Total Catskills	6,787	1,604	8,391
Grand total	82,983	8,161	91,144

The total stumpage is less than we anticipated. The computation shows 8,065,986,000 feet B. M. of timber sizes and pulp wood. There can be no question but the figures are a very conservative statement of the quantity. It is a matter of experience that ocular estimates when applied to large-sized timber are always low. A comparison of tables showing the contents of trees indicates that in trees having diameters breast high, of from ten to sixteen inches, a difference of one inch in diameter will show a difference varying from 18 per cent. on 10-inch diameter to 14 per cent. on 16-inch trees. The average is approximately 16 per cent. of the volume. The eye detects inch classes more readily on smaller than larger sizes, and as the timber on State land is generally of large diameter, the result is an underestimate.

The tables show that 97 per cent. of the total timber is in the Adirondack region; that 93 per cent. of the total is within the Adirondack park; that 54 per cent. lies in Hamilton county; that 41 per cent. of the total consists of hardwoods, and 35 per cent. of the entire quantity is spruce.

An analysis of this table seems to indicate that the figures are not as high for hardwoods as they should be. The mixed Adirondack forest contains, on the average, about 70 per cent. of hard-

wood trees. The lumbering has tended to decrease the volume of softwood, but on the other hand, many of the larger hardwoods are very defective.

These figures include only merchantable saw timber and pulpwood. No attempt has been made to estimate material in small trees that might be available for cordwood, poles, post, ties, etc.

The tables contain a vast amount of interesting information and deserve careful perusal.

CAMP SITES

The constitutional restrictions do not prohibit the great forest region from being used as a playground, a place for recreation and health resort, but do restrict its use for other purposes. The use of these lands for this purpose is extensive. The prohibitions tend to temporary use and discourage fuller enjoyment and greatest benefit. This is a matter of such importance that it deserves particular attention.

Extent.—Table XXI shows there are 1,075 miles of water frontage in the Forts Preserve exclusive of Lake George islands; that 584 miles of this shorage is suited for camp sites. If the entire frontage were divided into camp sites with 200 feet frontage, there would be 11,600 available sites. The State should not lease more than a portion of them, and if one-half were left as public camping places there would still be 5,800 for other purposes. If we compare the vast frontage upon these lakes and ponds with well known bodies of water we will find that it is equivalent to three and one-half times the entire shore line of Lake Champlain in this State; or seven times the frontage of Lake George exclusive of islands; or the shore line of Lake Ontario from Fort Niagara to Cape Vincent; or both sides of the Hudson river from its mouth to its source. It is, therefore, at once apparent that there are sufficient sites for both the transient and a permanent occupant, also for those who can and those who can not afford to pay a rental.

TABLE XXI.—SUMMARY OF CAMP SITES

COUNTY	Total miles shore	Miles camp sites	Miles of waste shore	Range of rentals per site	Total rentals 25 sites per Mile	Number of sites at 25 per Mile
St. Lawrence	35.75	14.50	21.25	$5 to $50	$3,746	96
Oneida	2.00	1.50	1.00	15 to 20	615	37
Warren*	32.49	12.08	20.41	5 to 20	2,601	301
Hamilton	373.85	231.25	142.60	5 to 50	165,126	6,029
Clinton	4.20	2.75	1.45	15 to 50	2,770	68
Fulton	25.00	25.00	.....	2 00	1,250	625
Saratoga	1.50	.....	.....	.....	.....	.....
Herkimer	204.75	52.75	152.00	5 to 50	21,378	1,323
Essex	186.70	80.40	106.30	5 to 50	28,115	2,011
Franklin	210.09	164.43	45.66	5 to 25	77,765	1,110
Adirondacks* Total	1.075.83	584.66	491.17	.....	303,266	11,600

* Exclusive of Lake George.

Use.— The present use is restricted by the following rules and regulations which were adopted in pursuance of the provisions of the constitution and the statutes.

RULES AND REGULATIONS

FOREST PRESERVE AND ST. LAWRENCE RESERVATION

(Pursuant to section 55 of chapter 65 of the Consolidated Laws as amended by chapter 444 of the Laws of 1912. Adopted April 30, 1912.)

1. Caution must be exercised in building camp fires and in setting fires of any kind. All inflammable material must be cleared from the ground before fires are kindled. On the Thousand Island Reservation, where fire places are provided, fires must not be kindled elsewhere. Fires must be completely extinguished before they are abandoned.

2. Lighted matches, burning cigars or cigarettes must not be thrown on the ground. Extinguish them first.

3. No structures except canvas tents are permitted. No tent so placed shall be leased. Any tent unoccupied by the owner may be removed by the Commission. On the Thousand Island Reservation such tents must be pitched at least 200 feet away from any public fire place or boat landing.

4. Dancing in any of the public buildings is prohibited.

5. No one may claim the right of exclusive use of any particular camp or tent site from year to year.

6. Defacing buildings, peeling bark or injuring trees is prohibited.

7. No boat is entitled to the exclusive use of any dock. There must be free access for all boats at all times.

8. Persons using the St. Lawrence Reservation must not leave refuse on the grounds.

9. All persons will be held strictly liable to the State for any damage done to State property.

Application was made to the Commission for permission to erect, upon State lands, " Open Camps." The application stated that remote and desirable places could not be ordinarily enjoyed because there was too great a burden imposed in packing necessary camp outfits; that camps of this character could not be enclosed, therefore were always open; that they would be built at private expense and given to the State and thus not be private property; and that they would be subject to rules and regulations of the Commission.

The Conservation Commission, September 2, 1913, duly adopted the following resolution:

Rules and Regulations, Re Construction and Use of Trails and Open Camps Upon State Land

Resolved, That the following rules and regulations be and the same hereby are adopted in relation to the construction and use of trails and open camps upon State land:

1. No person, association or corporation shall build any trail or open camp upon State land without first obtaining written permission from the Conservation Commission.

2. The location of such trails and open camps shall be fixed by the Commission.

3. Application for permission to construct such open camps shall state the source of supply and the character of the material to be used, and no such camp shall be constructed until the character of the material and the source of the supply thereof shall be approved by the Commission.

4. All such camps shall contain a conspicuous sign reading as follows:

" This camp is property of the State of New York and is open to the public."

Such sign shall be maintained at such camps by the person, association or corporation constructing the camp.

5. A suitable fireplace shall be constructed and maintained in front of such camp, the form and material thereof to be approved by the Commission.

6. No such camp shall be occupied by the same party or persons more than ten days in any year, nor more than three nights in succession. This rule shall not apply to State employees while engaged in fighting fires. A copy of this rule shall be posted and maintained in a conspicuous place at such camp.

7. The Commission may remove or discontinue the use of any such camps at any time.

8. No building, camp or structure shall be erected on State land except as above provided.

There are upon lands claimed by the State as the Forest Preserve about 700 cases of occupancy of various kinds. These vary from farms which are occupied and cultivated to small hunting camps or a few acres used for pasture. Where there are extended uses of the properties, the people claim title adverse to the State and substantially all such cases of occupancy have been transmitted to the Attorney-General for prosecution or determination of title. There are 406 cases reported, with buildings valued at $276,375. It is fair to say that approximately 95 per cent. of them are such as would be willing to execute leases. Nearly all of these occupancies are of many years standing. We have secured " disclaimers of title " as far as possible, and referred cases where they could not be secured to the Attorney-General. We have endeavored to prevent further erection of structures and thereby protect the State's interests. The question as to what should be done with these numerous occupants of the State land has been held in abeyance pending the voice of the people relative to leasing camp sites. It did not seem necessary to eject them or destroy property of a citizen if the people were willing to lease the privilege of occupancy.

The question of administering these matters is important, and will be further discussed under the title of Forest Management.

CONSTITUTIONAL PROHIBITION

The present provision of article VII of the Constitution which was enacted* in 1894 reads as follows:

"Forest Preserve.— Section 7. The lands of the State, now owned or hereafter acquired, constituting the forest preserve as now fixed by law, shall be forever kept as wild forest lands. They shall not be leased, sold or exchanged, or be taken by any corporation, public or private, nor shall the timber thereon be sold, removed or destroyed."

It was adopted when conditions were much different from what they are today.

During the two decades since that provision was adopted important economic, industrial and administrative changes have taken place. At that time there was but a slight appreciation of the importance of scientific forestry; there was not a single American school of forestry, and probably not more than five professional foresters in the whole country. The forests were then generally considered as something the maximum quantity of which was fixed, and not capable of reproduction or increase by growth. The area included has increased from 720,744 acres to more than 1,800,000 acres; our population has grown from 6,000,000 to 9,000,000 people. It is, therefore, apparent that the prohibition was made at a time when there was but 40 per cent. of the present area and 60 per cent. of the present population, and when the quantity of material affected was but a small part of the whole. However, at the present time, the timber on State land is a large portion of our total forest resources. It is estimated that the amount of standing timber in the Forest Preserve counties in 1894 was approximately 40,000,000,000 feet, board measure, and that this quantity has decreased until at present there is not over 25,000,000,000 feet. It is estimated that in 1895 approximately 4,000,000,000 feet, or 10 per cent., was owned by the State, while now the stumpage on State land is approximately 8,000,000,000 feet, or over 30 per cent. of the total in the Forest Preserve counties, or 20 per cent. of the whole stumpage of the State. Dur-

* An amendment was adopted November 4, 1913, providing that three per centum could by authority of the Legislature be used for water storage purposes.

ing this period a change has resulted in the proportion of lumber cut in this section from about 1 per cent. of the stand in 1894 to approximately 2½ per cent. at the present time.

This provision of the Constitution prevents any direct utilization of this vast resource. The question that naturally arises is, what more benefits could be derived if the Constitution permitted?

There are many phases of this question, such as the indirect benefits of protection to watershed, regulation of flow of streams, game cover, health resort, recreation grounds, and aesthetic value; the possible commercial returns which are now lost but might be derived; the increased benefits which might accrue through lessened restrictions; the demands of the State upon this area as a source of wood supply; the adoption of a policy which will be beneficial to these regions; the efficient administration and honest enforcement of the forest law; the increase of the preserve and its better protection through funds derived from a wider use. These, and the future management of this territory, are all questions which should be carefully considered.

FOREST MANAGEMENT

The proper use of this great area means more to the people of this State than can be briefly stated. There are honest differences of opinion as to whether any modification should be made in the present Constitution. If we could be assured of honest and efficient administration, then changes could be favorably considered. In order to present facts which are important we will assume for the purpose that whatever is attempted will be done properly and by people who are thoroughly trained for the work.

Reconnaissance.— The first step should be a careful examination of the forested area. The work should be done and data procured similar to that found in Appendix I of this report, entitled "A Forest Survey of a Parcel of State Land." This will give accurate information as to the location of forests, their composition, the stands of timber, the types of growth, and will provide information as a basis for planning operations.

Classification.— The second step should be a delineation of the lands into two kinds: First, protective forests on mountain tops

and steep slopes together with areas around certain bodies of water which should not be lumbered. Second, the less abrupt and more remote areas which could be lumbered conservatively.

A classification of this character would probably result in 200,000 acres being retained for protective forests and about 1,000,000 being used for wood production. The revenue from the former would be derived from leasing of camp sites, while from the latter it would come from the sale of mature, dead and down timber and from trees which should be cut in order to permit proper growth of younger trees.

Location.— There are, as already noted, 313,277 acres of the preserve which are outside the two parks. This area includes 183,725 acres of land under water, leaving a balance of 129,552 acres of land of varying character. This area of land is contained in 1,166 separate parcels exclusive of the islands in Lake George or lands under water. They do not perform a true function as a "Forest Preserve." The areas vary from a fractional part of an acre to tracts of a thousand acres. A few are so situated that they could be used for forestry purposes, but fully 90 per cent. of the parcels are small, isolated, often difficult to locate accurately, and difficult and expensive to protect. As a matter of policy it would seem more desirable to dispose of these outlying areas and acquire other land within the parks. This will result in consolidating present holdings, reduce administrative expense and have the same investment and area better serve its purpose.

Utilization of Timber.— The compilation shows that there was found upon the 1,585,496 acres 8,065,986,000 feet B. M. of merchantable material. This timber is all upon the 1,204,538 acres classified as merchantable forest area. The average acre of such lands, therefore, contains about 6,700 feet B. M. of material.

There are included in this amount both mature and immature trees. There are large areas of virgin forests (estimated 70,000 acres), also extensive areas of lumbered lands (estimated 1,130,000 acres) upon which the greater proportion of timber is mature and is not increasing in volume or value. There are other areas covered with poplar, a tree that reaches maturity in a comparatively short time, which is very valuable for pulp and other pur-

poses that not only will not further increase in value or volume, but will deteriorate and become a total loss if not utilized within a few years after reaching maturity. When these trees die they fall to the ground and greatly increase the fire hazard. The lands containing mature timber are not accumulating wood growth because, on the average, decay equals growth.

The proper use of this great area is a matter of vital importance. The constitutional inhibition practically prevents any direct use, except for camping, hunting and fishing. The entire wood production on the mature areas is at present a total loss because there is no utilization of the larger trees. If we assume that the average annual growth should be 200 feet per acre per annum then the annual growth on the merchantable forest areas alone would approximate 240,000,000 feet B. M. Once the land is placed under systematic forest management, this amount could be secured annually without reducing the forest itself. It means taking the interest on the wood principal. The quantity would be further increased by ultimate growth on what are now non-merchantable areas and through reforesting of denuded lands.

Figures, e. g., 240,000,000 feet B. M., as such, do not convey their full significance. This represents nearly one-third the entire lumber cut of the State. If cut into inch boards there would be sufficient lumber to build a board walk 150 feet in width from Albany to Buffalo.

The present system does not best provide a future supply of timber. If the annual increment were utilized it would tend to increase forest preservation by reducing the demands upon other areas. Price is regulated by supply and demand; therefore, decreased production of timber causes higher price, and the increased price tempts the owner to harvest his forest crop.

The timber cut of the State is decreasing. It has been reduced from one and one-quarter billion feet in 1908 to less than one billion feet in 1912. The cut of spruce in one of the largest counties has decreased from approximately 24,000,000 in 1910 to less than half that amount in 1912. The present lumber cut of the State is an enforced one. The portable mills are manufacturing what the larger operators are unable to secure. The cut is approximately five times as much as the annual growth, and

Forest After Being Lumbered Under Forest Management — Ne-ha-sa-ne Park, Adirondacks

consumption is at least sixteen times the growth. The question of the source of supply of our necessary wood materials is one that must be seriously considered. Our demands are great and, under present methods, will soon lead to exhaustion, but if the resources of the State are properly developed the necessary supply can be produced.

The present use of the Forest Preserve is protective and aesthetic. The practice of proper forestry methods will not affect either use. The effect of lumbering operations under such practice as conducted on the parks of Dr. Webb or the Whitney estate are scarcely visible today. These forests have cleaner floors and are freer from debris than similar areas on the State land, in fact such operations have improved the appearance, the dead, down and diseased trees having been removed.

Only a few people appreciate the fact that nearly all the merchantable material in a forest is contained in a few of the larger trees. The larger trees are but a small proportion of the whole stand, therefore, their removal does not injure the forest cover.

There are instances when large quantities of timber upon State lands have been injured by fire but the particular Commissions charged with administration of the property, acting under opinions of the Attorney-General, have not been able to utilize the material. There are other cases where valuable material cut in trespass cases has been left to decay because the Constitution semed to prohibit the utilization. There are similarly quantities of dead and down timber that cannot be removed. Such material left upon the ground does not result in any value that the State might secure through indirect benefit. In fact, fire-killed or cut trees are an incentive for trespass and increase the protective work. On the other hand, any provision for limiting the sale of timber to fire-killed trees would be a great incentive to a would-be purchaser to cause fire in order to force the cutting.

If the restriction is to be modified the modification should not be limited to fire-killed trees. If only dead and down trees are permitted to be removed the cutting of roads for removal will be so out of proportion to the value of material and utilization that there will be no profit or benefit derived by the State.

Camp Sites.— We have already called attention to the fact that

there are approximately 580 miles of shore line suitable for camping purposes. There is a distinct demand by the people for permanent rather than temporary use of these lands. At present only tents with board floors are permitted. They are sufficient for the transient but the person who desires to spend a few weeks, especially with a family, requires, in order to secure proper enjoyment, a structure that affords better protection and will allow housing of equipment during the remainder of the year.

A demand has, therefore, been developing that the State lease small parcels of land for a period of years for that purpose.

The State is now maintaining this vast area at a large expense and such use would detract little, if any, from the demands made by the State upon this area. The general opinion seems to be that a permanent occupant, contrasted with a transient, would become a better protector of the forests, fish and game, that the investment made as a result of the lease would create in the lessee a personal, permanent interest in protection of the forests from trespass or fire, an assurance that the fishing in the body of water upon which he was camping would not be injured by illegal methods, nor game similarly taken.

There can be no question that such use would produce a revenue, although there would be required an initial investment for surveys and organization.

There are questions, such as the size of parcel; period of lease; proportion of sites, on a particular body of water, to be used; amount of rental to be charged; restriction to be imposed; supply of wood for fuel; and doubtless others which must be considered. They are largely administrative problems, but some of them are so broad that they affect State policy.

Indirect Uses.— The fact that many of our important rivers have their headwaters in the Adirondack and Catskill region and that forest cover has a beneficial effect in regulating the flow of streams coupled with numerous other previously enumerated functions makes the preservation of forests within this area of great importance to the State. It is a factor which, as a matter of State policy, deserves first consideration. The really important question is how much the indirect benefits will be reduced if the direct uses (lumbering and leasing of camp sites) are realized.

There are examples, such as Nehasane Park, the Whitney Estate Preserve and others in the Adirondacks where lumbering has been practiced conservatively and the forests have not been destroyed nor the indirect uses sacrificed. There is no good reason why a productive forest will not produce shade, have a "duffy" floor, be a satisfactory home for game or protect the watersheds. The commercial forests of Europe produce these benefits in a greater degree than nature does in the Adirondacks.

The fact that forests on mountain tops or steep slopes are not to be lumbered eliminates areas where the cover might be endangered. The areas around our desirable lakes would be used for camp sites and if proper rentals were paid would afford as great a revenue as could be secured by lumbering. It would not, therefore, be necessary in the latter instance to remove more than the few mature trees necessary for fuel of the campers.

A forest produced and maintained under a proper system of forest management would not be less advantageous from any standpoint.

Fire Protection.— It is true that the slash consequent to lumbering increases the fire hazard, but lopping of evergreen tops reduces the risk to a short period. The present conditions permit reasonable utilization and only a comparatively small amount of slash would be left. As already stated, practically all the merchantable material in a forest is contained in a few of the larger trees, which form but a small proportion of the whole stand, therefore, their removal does not seriously injure the forest cover or produce a large quantity of slash. The operation will necessitate the construction of roads, which will make the pathless localities more accessible and thus afford quicker and cheaper means of travel. These roads can also be made into necessary fire lines.

The problem of fire protection is by observation station and patrol solved in principle. There is need of much educational work as a preventive, and extension of the system to assure greater security. Appropriations even for such manifest needs are not easily obtained, but a revenue from these lands would make more intensive protection possible.

Financial Aspects.— The Preserve is at present a pleasure and protective forest. Its restricted use makes it somewhat of a luxury. It is difficult to compute its cost because nearly one-half has been acquired through the non-payment of taxes. It is fair to assume, however, that it represents an investment of approximately four million dollars. The interest on this amount at 5 per cent. is $200,000 per year. The taxes which the State pays upon this land amount to $150,000 per annum. The cost of fire protection and administration is approximately $15,000 per year. The total carrying charge, therefore, amounts to at least $365,000 per annum. None of these charges is reducible. The expenditure for fire protection ought to be increased. The cost of fire protection at the present time is not over one-half mill per dollar of valuation. This is far below the average rate of insurance under less dangerous conditions.

Revenue is an important matter to the State. The fact that there is a direct outlay of $165,000 a year and an interest loss of $200,000 are not insignificant matters to the Empire State. But we must add to this the value of the wood material which is going to waste through non-utilization. We have already stated that the wood growth even now should approximate 240,000,000 ft. B. M. per year and if we allow a stumpage of $4 per M ft. this means an additional loss of $960,000.

We must again add to these large sums the amounts which would be expended for labor in utilizing this growth. It has been estimated that $16 for every thousand feet of lumber manufactured goes to labor. This means a loss of potential wages of $3,840,000. There would be additional revenue from leasing of camp sites, but this would be difficult to measure. If we assume that 95 per cent. of the present occupants, or 380, would require leases, and at least 500 others were taken, this would produce a total of 880. If the leases averaged $25 each, this would yield a gross income of $22,000. In a few years this sum would be greatly increased.

The question seems to be: Does the State desire to continue a policy which causes a direct annual loss of nearly a million dollars and an indirect loss of four times as much, or does it desire to place its forest property not only on a self-supporting, but on a very substantial revenue-producing basis?

STATE POLICY

The State policy during the past thirty years has been to procure a large area of forest land in our two mountain regions. It has been secured by withdrawing lands already owned and, at a large outlay, acquiring additional areas.

The constitutional prohibition adopted in 1895, after a series of land scandals and deplorable trespasses, was an attempt to put this land and timber beyond the reach of the spoils system. It fully accomplished its purpose and is still just as effective. The organization for the protection and administration of the Forest Preserve has, during the past twenty years, been perfected and brought from a meagre unskilled few to a complete force consisting of technical foresters, surveyors, title lawyers, and forest rangers. Lands and timber of the State were then looked upon as public plunder, but today titles to property are determined after trial of the case upon the facts; wilful trespasses have, through more vigorous administration, more efficient patrol and better public sentiment, practically ceased.*

There are still people who would be willing to take advantage of situations that might arise, but past experience has shown and court decisions have decreed that compromises and stipulations are of no avail; that any such agreements will not procure more than temporary benefits; that they are illegal, and, therefore, their purposes cannot be accomplished. These speculators are not likely to take advantage of the State when the results will not be beneficial to them.

The first step in the adoption of a wise policy as to the future management of this vast area is consideration of the purpose to which it is best adapted and what demands of the State it can satisfy to the largest degree. It is on account of its soil, topography, elevation and climate, a region which can best be used for forests. It naturally follows: What demands does the State make upon its forests, and which of these can this region supply? We have already recited the indirect uses, particularly in a mountainous area like the Adirondacks where so many important streams have their sources; the effect of stream flow upon water power; the health, recreation and game resort; the source of wood supply, and the aesthetic considerations.

* See annual reports of Conservation Commission.

We have attempted to show that good forest management which will produce better commercial forests is none the less useful in producing the indirect benefits. The more valuable and useful the property, the more the people become interested in it and demand continuation of the benefits. The fact that the State makes this area self-supporting, at least, ought to increase rather than decrease interest in the property and forestry in general. If greater appropriations were available or an income could be secured, better forest protection could be afforded; forest property would be better insured against fire; the 100,000 acres of denuded lands could through reforesting be placed under forest cover; additional areas acquired; more lands would be better protected; and instead of having less we would have a greater forest cover.

There are important questions as to the development and industries within this vast area. Do we realize that an area larger than the State of Delaware is being withdrawn from use by its own owners? Is it necessary? How far can this process continue without approaching dangers other than financial returns?

If the forests are maintained for the indirect uses alone, who is going to blaze the trail, carry the pack basket, guide the sportsmen, fight the forest fires, plant the trees, cut the camp wood, cook the food or get food to cook? We do not want a wilderness. It must be made possible for people to live and earn a living in these places or there will be no "guides" or other people to employ. They cannot earn a living by guiding a few days during the summer. Sufficient employment must be provided for these people. The State cannot put them all on the pay-roll. Industries of necessary and suitable kinds must employ their services. In a forest country such employment must naturally be in connection with the lumber industry. State land must furnish its share.

Further purchase and consolidation of holdings would greatly reduce the administration expenses. The immediate necessity for surveys would in many cases be eliminated by acquiring small interior parcels.

There are enormous investments in lumber, pulp, paper and other mills which depend upon our forest lands for raw materials. These mills and the lumbering industry employ thousands of men

and women. The wages paid are a big factor in our industrial life. This material is again used in remanufacture and more money given to labor for making necessities of life. The future of many towns and cities in a large measure depends upon these forests. They are all factors in our industrial life.

Other industries are represented by hotel, transportation, mercantile and allied businesses which accommodate the commercial and tourist trades. These industries are not only of importance in these sections but their influence extends outside the Preserve regions.

This report may be criticized for absence of more exact information, but, as stated at the beginning, the method which we had to pursue, on account of lack of special funds for the work, does not permit drawing exact mathematical conclusions. The preparation of this report is based not only on the field work done for this particular purpose but also upon years of association with the problem discussed and many other competent sources of information.

There are forest surveys and published reports upon many large Adirondack forest areas (e. g., "Practical Forestry in the Adirondacks" — Bulletin of the U. S. Forest Service; Forest Working Plan for Township 40 — Bulletin 30 of the U. S. Forest Service; "Adirondack Spruce," by Gifford Pinchot and Henry S. Graves; A Forest Working Plan for Townships 5, 6 and 41; Report of Forest, Fish and Game Commission 1902–3). There are also many unpublished reports containing available data.

The vast and far-reaching scope of the question, with its many and intricate details requiring wisdom and experience for its solution, is complicated by possible political influences; but it must be studied from all angles, each element weighed separately and the final decision rendered as the result of a careful consideration of the facts unaffected by sentiment.

Respectfully submitted,

C. R. PETTIS,

Superintendent State Forests.

ANNUAL REPORT

OF THE

DIVISION OF FISH AND GAME

[181]

FOURTH ANNUAL REPORT

OF THE

CONSERVATION COMMISSION

DIVISION OF FISH AND GAME

To the Conservation Commission:

Herewith I transmit to you, pursuant to law, the annual report of the Division of Fish and Game for the fiscal year ending September 30, 1914.

Respectfully Yours,

JAMES J. FOX,
Deputy Commissioner.

December 31, 1914.

ANNUAL REPORT

OF THE

CHIEF GAME PROTECTOR

Hon. James J. Fox, *Deputy Conservation Commissioner:*

Sir.— I respectfully submit herewith my report on the enforcement of the Conservation Law relating to fish and game of the State of New York for the fiscal year ending September 30, 1914, which covers the work of the protectors in the bringing of actions, together with the amount of recoveries of fines and penalties, and prison sentences for violations of the Conservation Law; also the amounts derived from different sources, such as hunting and netting licenses, tagging of trout and imported game, etc.

In making comparisons with previous years it is very gratifying that the statistical table which follows shows an increase in the number of cases successfully brought by the regular protective force, which prosecuted this last fiscal year a greater number of cases than during the preceding year, showing a gain of forty-two cases. This increase over the last fiscal year, the record for which was the largest in the history of the State, again demonstrates the strict attention that the regular protectors are giving to their duties of enforcing the Conservation Law in relation to fish and game, and with a very few exceptions their work is satisfactory, considering the number of protectors that are on a regular salary.

The work of the special protectors, except in a few instances, does not compare at all favorably with the work of the regulars; but I will refrain at this time from going into the matter fully, as I handle the work of the special protectors in detail later on. It is entirely due to the special protectors, and not to the regulars, that the work of the force as a whole shows a slight net falling off as compared with 1913. (See page 17 of Commission's Report.)

Passing upon the work of the regular protective force, the

average gross recovery per case is commendable, considering the fact that all persons prosecuted are not fined, as there are many suspended sentences and John Doe proceedings. I am firmly convinced, from making comparisons, that the law giving protection to fish and game is being rigidly enforced. The protectors who are retained from year to year become proficient, as their record will show; and it is gratifying to call to the Commission's attention the increase that has been made from the year 1911 up to 1914, every succeeding year showing a larger number of cases prosecuted, and showing a larger recovery of fines and penalties.

Even with this grand total I believe with other game protectionists that but a small percentage of the actual violations are ever apprehended, as it is impossible to do so with the 125 men on the force at the present time. I wish at this time, as I did in the annual report of 1913, to recommend an increase of the protective force to 200 men, with an expense account sufficient to enable them to patrol their territory at least twenty-six days every calendar month.

One of the most vital questions now before the citizens of the State is that of the conservation of our natural resources. I do not believe that there has been any other State so abundantly endowed with wealth of forests, fish and game as this our own Empire State; nor do I believe that there has been any other State where the citizens have been more careless with their treasures, more prodigal with their birthright. The American people have wasted their wealth of mine, forest and stream, allowing the wanton destruction of the fish and game; and only in the last few years have they come face to face with the fact that if this great State is to continue to be a paradise for the sportsman we must conserve our fish, game, water and forests, to preserve our birthright not only for our own comfort, but also for the coming generations. I trust that the Legislature can be prevailed upon to provide means for the enforcement of the laws that have been enacted giving protection to the fish, game, lands, forests and waters of the State. In the past thousands of persons in this State have looked upon the protection of game and fish as an insignificant affair, when as a matter of fact, next to the agricultural assets of the State, nothing can exceed in value its game, birds and fish if proper protection is given. I know that the citizens of the State

of New York are beginning to be firmly impressed with this fact, and desire to see rigid protection given to the wild life of the State, the maintaining of the hatcheries and the establishing of additional game farms.

AMENDMENTS TO THE LAW

The amendments to the Conservation Law in relation to fish and game made at the last session of the Legislature are not as many as in former years, but are of greater importance, as they perfect the law and make it practical and more workable. They comprise the following changes:

Section 32, which provides the punishment for a misdemeanor, is amended making the imprisonment one day for every dollar of the fine.

Section 159 is amended to include "fish and aquatic animals," and to allow the possession under a license issued by the Commission of fish, game birds and aquatic animals for propagation purposes.

Section 165 increases the protective force twenty protectors, from 125 to 145.

Section 177 allows any duly organized association for the protection of game to run field trials for dogs upon obtaining a written permit from the Conservation Commission.

Section 181 is amended, allowing the transportation of quadrupeds, birds or fish lawfully taken or possessed in one part of the State as provided by section 178, and they may be possessed by the taker in any part of the State for the same period of time during which they may be lawfully possessed at the place where taken.

Section 190 is cleared up, so that there will be no misunderstanding as to the rights of a person to ship deer when he accompanies the same without the necessity of a shipping tag being placed thereon as provided by section 178 of the Conservation Law.

Section 191, relative to the possession of wild deer or venison, is changed only in so far as it reduces the license fee for the possession of venison until January 1st, from $5 to $1.

Section 198 provides for a slight change in the open season on mink, raccoon and sable. Formerly the season opened on November 1st. The new amendment provides for the opening of the

season on November 10th, the season closing the same as formerly, April 20th.

Section 199 is changed, making the opening of the season on skunk November 10th, to February 10th, it formerly being from November 1st to January 31st.

Section 200, relating to the propagation of skunks, is amended to allow the possession of all species of fur-bearing animals to be kept alive in captivity at all times for the purpose of propagation and sale, provided a license so to do is first obtained from the Commission. The license fee was formerly $10, and is reduced by the amendment to $5.

Section 201, giving protection to muskrats, changes the opening of the season from November 1st to November 10th, closing April 20th. In addition to prohibiting the injuring or disturbing of muskrat houses, it prohibits the taking of muskrats by shooting. The prohibiting of the shooting of muskrats was done for the purpose of giving a more high class fur, as a muskrat taken by shooting is only worth about twenty-five per cent. the value of one taken in traps, even where the fur is of equal quality.

Section 214, relative to the season on pheasants, changes the open season from Thursdays in October to the last two Thursdays in October and the first two Thursdays in November, and possession is allowed during the period of time between the first open Thursday in October and the last open Thursday in November. Only wild male pheasants may be taken.

Section 232 changes the opening of the season on trout from the 15th of April to the first Saturday in April, closing August 31st the same as formerly. This makes the open season on trout uniform throughout the State.

Section 234 makes a very important change in the season on lake trout. The season in 1913 on lake trout was from April 1st to December 31st. The amendment makes the season from April 1st to September 30th.

Section 235 makes no close season on lake trout and whitefish which are taken in Lakes Erie and Ontario. Lake trout and whitefish when so taken may be possessed, bought and sold, provided that every person to whom a license is issued to take such fish with a net or nets operated from power boats shall, when required by the Commission, furnish without charge to the Commission

eggs and milt from such fish taken by him during the spawning season. Such eggs and milt shall be taken by the Commission for propagation only and shall be taken from the fish by the agents of the commission.

Section 250 prohibited placing fish in waters that were inhabited by trout. In some instances waters which had formerly been trout waters had become inhabited by pickerel, and should no longer be regarded as trout waters. The amendment proposed provides that whenever the Conservation Commission shall determine that any waters of the State heretofore inhabited or stocked with trout are no longer to be regarded as being inhabited by trout or suitable for trout, the Commission may by an order permit such waters to be stocked with any species of fish.

Section 251 contains an important amendment, as it gives jurisdiction to the Conservation Commission to prohibit fishing within fifty rods of any dam or fishway erected by the State. Heretofore it only prohibited fishing within fifty rods of any dam which contained a fishway. In a great many instances fish congregate in the deep water below the apron of the dam, and are taken out in large numbers. In such instances the Commission is vested with power to prohibit fishing within fifty rods of such dam if it so wishes.

Section 355 relative to penalties is amended so as to allow a penalty of $10 to be inflicted for the taking of short lobsters, instead of $50 which was mandatory heretofore.

Section 365 as amended, contains a provision that if notices have been once posted or land established as a private park, after personal service upon a person in the name of the owner or owners of a written or printed notice containing a description of the premises and warning all persons against hunting or fishing or trespassing thereon, this is to act the same as where lands are posted as provided in section 361 of the Conservation Law.

As provided in section 366, the Commission may set aside certain lands owned by the State, except those located in the Adirondack or Catskill parks, as a game and bird refuge; or the Commission may purchase lands in the name of and for the use of the State in any town of the State outside of the limits of the Adirondack or Catskill parks, containing not less than one hundred acres, or may purchase the shooting and fishing rights in

connection with such land, and may establish thereon a game and bird refuge, upon publishing and posting the notices as provided in section 360.

Formerly section 372 only allowed a person who was in possession of a breeder's license to kill elk or deer, by shooting or otherwise, between the first day of October and the first day of March, both inclusive. Pheasants could be killed by shooting or otherwise between the first day of October and the 31st day of January, both inclusive. Mallard ducks and black ducks could be killed by shooting or otherwise from the first day of October to the tenth day of January. By the amendment, elk, deer, pheasants, mallard and black ducks may be killed in any manner at any time under a breeder's license, but mallard or black ducks killed by shooting under a breeder's license shall not be bought, sold or trafficked in.

Under the provisions of section 375, it formerly provided that any dealer in fish duly licensed could hold during the close season, in a storehouse to be designated by the Commission, such part of his stock of fish as he had on hand undisposed of at the beginning of the close season, such dealer to give a bond to the people of the State conditioned that he will not, during the close season ensuing, sell, use, give away or otherwise dispose of any fish which he is permitted to possess during the close season; that he will not in any way, during the time when such bond is in force, violate any provisions of article five. The bond may also contain such other provisions as to the inspection of the fish possessed, as the Commission shall require. This section has been amended to allow the possession of frogs during the close season upon the same conditions.

There is one serious defect in the Conservation Law that was not corrected at the last session of the Legislature. The change which I suggest is very vital to a smooth and perfect working of the law. In codifying the law it was the intention of the codifiers to make it "permissive" in form. Therefore there should be one general penalty section covering all violations, except where explosives are used for killing fish, or in cases of graver violations of a similar nature; in such cases a more severe penalty should be provided. In the present law the penalty sections are conflicting and confusing. No penalty clause should follow a per-

missive section, because there could be no violation of such a section.

The past year has been one of increased activity in every branch of our work. The propagation and preservation of our fish and game are recognized as of vital importance by the public at large as well as by the sportsmen. Evidence unmistakable of this is found in the great increase in the number of calls upon the Commission by persons seeking information on fish and game matters. We are unable to supply the demand for the law books. The Legislature should be petitioned for at least fifty thousand copies, instead of thirty thousand copies as now provided. In justice to the hunter, so that he can be well informed as to our laws, he should be provided at the time he takes out a hunting license with a full and complete copy of the Conservation Law relating to fish and game. In many instances the syllabus furnished has not been sufficient, as it does not give the full law, simply providing a synopsis.

I desire at this time to report to the Commissioners in brief the revenue derived from different branches of the Department of Fish and Game, also the number of birds and eggs distributed from the bird farm at Sherburne, all of which will be found in the statistical table following.

During the fiscal year of 1914, the Conservation Commission issued hunting licenses to the amount of		$201,022 00
Collected in fines and penalties		66,346 63
Net licenses		14,986 14
For the tagging of game		5,993 70
For the tagging of trout		6,585 00
For breeders' licenses		425 00
For scientific licenses		60 00
For importation licenses, etc		1,120 35
Add to that the production at the game farm:		
40,000 eggs at 40 cents each	$16,000 00	
5,000 birds at $4 each	20,000 00	
1,400 brood birds at $4 each	5,600 00	
		41,600 00

Add to that the commercial value of the fishes, which is given by Dr. Bean, our Fish Cuturist, as about	$175,000 00
Grand total	$513,138 82

This makes a grand total which not only pays every dollar which is expended for the protection of the wild life of the State, but turns a handsome surplus into the State Treasury.

NON-SALE OF NATIVE GAME

As in previous reports, I strongly recommend the continuance of the law which prohibits the sale of native game, except that I believe that as there is a great demand upon the part of the hotel and restaurant keepers of the State of New York for ducks, certain species should be allowed to be imported under the provisions of section 373, adding thereto the species of ducks that could be imported from without the United States and sold in this State after being tagged as provided by the section quoted. The non-sale of game has certainly taken away the initiative of the market hunter to hunt for a moneyed consideration, and the law which prohibits the sale of native game has the undivided support of the sportsmen of the State of New York.

TAGGING OF TROUT

The sale of trout raised in private hatcheries has gradually increased to such an extent that the revenue derived therefrom now exceeds that obtained for the tagging of imported game. At the present time there are fifteen tagging machines leased to as many private hatcheries, and all excepting six are being operated outside of New York State. The market for this commodity, as I have stated, is gradually increasing, and the law legalizing the sale of trout from private hatcheries has continued to meet with the approval of the hotel and restaurant proprietors, and has come in for no criticism except from the hatchery owners, who have sought to reduce the fee from three cents as provided at the present time to one cent for each tag. In the past trout from private

NOTE.—Figures above given are amounts received during the fiscal year October 1, 1913, to September 30, 1914. Figures given elsewhere in the financial statement (see p. 58) are amounts turned into the State treasury during the same period. Receipts for September of any fiscal year cannot appear as turned into the State treasury until the following fiscal year.

hatcheries could not be sold in the State of New York except during the open season on native trout. At the present time they can be sold at any period, thereby providing a market the year round, and at the same time giving protection to our native trout. I feel that the Commission should do everything possible to retain the fee for tags as at present. I cannot see where it works a hardship upon the hatchery owners, as they have claimed, because trout are a luxury which is paid for by the consumer.

ADDITIONAL PROTECTORS

Some protectionists have held that in consequence of rigid enforcement of the law, violations thereof would diminish from year to year; but the records of the department show that each succeeding year we are apprehending a larger number of violators. As I have stated previously, I believe that but a small percentage of the persons committing violations are ever brought to trial. Therefore I again submit for the consideration of the Commission the advisability of increasing the protective force to at least two hundred men.

GAME INCREASING

As in former years, I have endeavored through the force of protectors to ascertain the conditions as to game throughout the State. I feel from the reports that have been made that the rigid protection this Commission is giving to the wild life of the State is bringing about better conditions, and the game is gradually increasing. This holds good particularly as to deer. The northern protectors report that never in the history of the State have there been as many deer in the mountains as at the present time. I think this is true, as it is borne out by the numerous complaints made to the Commission of damage being done by deer. This is especially true as to counties in which there is no open season.

This would seem a broad statement to make, owing to the fact that there is such a large number of hunters who go afield yearly; but it should be taken into consideration that in the early history of the State deer which became yarded were killed by the hundreds by packs of wolves; the natives considered the deer forests their pork barrel, and the lumbermen made it a custom to employ hunters to kill deer, which were ground up in sausage machines

with pork and fed to their lumber jacks, all of which has been eradicated. There are no longer wolves in the Adirondack mountains, and the lumbermen have found that the killing of deer to feed to their help has become too expensive; and this, with the buck law, all tends to bear out the statement of the northern protectors that deer are more numerous than ever before in the history of the State.

Also we have had good reports from hunters, who inform us that they are finding more partridge in their native covers than since the epidemic some ten years ago which practically wiped out the native grouse.

Dogs

This department has received many protests from bird hunters, who claim that the law works a hardship upon them, as it prohibits taking dogs into forests inhabited by deer, or harboring them or allowing them to run at large in the Adirondack Park, or taking them upon forest preserve lands. There should be an enactment of law which would provide for the licensing of bird dogs, so that a sportsman who wished to hunt partridge in the northern counties would be permitted to take his dog into forests inhabited by deer for the purpose of hunting birds. I think this could be done safely by empowering this Commission to issue a license to an owner of a bird dog, permitting him to use his dog for hunting grouse, except within the Adirondack Park. With said license a tag could be issued, similar to the tag which is placed upon a licensed net, the tag to be attached to the collar of the dog, with the number and the name of the owner thereon. This would place the responsibility for the dog upon the owner if caught running deer.

Woodcock

The hatch of the native woodcock is increasing, and with the flight bird, woodcock shooting within the State is providing a great source of enjoyment for the sportsmen. The adequate protection which I believe is being given this species of game bird by allowing only four to be killed in any one day, will gradually lead to the increasing of the birds breeding within the State.

Hen Pheasant Nesting

PHEASANTS

In a great many counties pheasants are very plentiful at the present time. This is particularly true in the western counties of the State. Additional protection has been given to pheasants in four counties until 1915, and in fourteen counties until 1916. Pheasant shooting is bound to become exceedingly popular in the State. They are an excellent game bird, although not laying for the dog; but an intelligent bird dog soon becomes familiar with their habit of running and skulking, and soon trails them, so that the sportsmen enjoy pheasant shooting exceptionally well. With the additional game farms provided at the last session of the Legislature, pheasants will soon become very numerous; and wih the increasing of the game farms which will raise pheasants and liberate them in the covers of the State, the open season can be gradually lengthened, allowing a larger number of birds to be killed each season.

The problem of properly distributing these birds has engaged the attention of this department during the past year, and in conference with Mr. Rogers, the superintendent of the farm, I have become convinced that the proper procedure would be to distribute the pheasants through the protective force, giving each county its apportionment, and instead of shipping as we do now the half-grown birds, the covey should be shipped with the mother hen. If she is liberated in suitable covers, the hen will stay with the young pheasant chicks until they are nearly grown. In that way we would eradicate the loss of a large number of pheasants. The method which we are following at the farm at the present time is to release the mother hen with the brood as soon as the young chick becomes used to the call of the hen, feeding at certain periods and in certain places on the farm, so that the hen will return with her brood to these feeding spots. This makes it possible for the chicks to be caught up at the time of shipment. The superintendent informs me that while this is the most scientific way of raising pheasants to maturity, it entails a great loss of pheasants by their straying away from the mother hen and not returning. By shipping the hen with the brood, no pheasants would be lost, and the percentage of those raised to maturity would be increased.

In some instances, complaints have been made to the Commission that pheasants are destructive to the agricultural interests; but this is offset by the favorable reports received of the benefits the pheasants are doing, as they feed largely upon insect life. Instances have been known where a flock of pheasants has protected a potato patch from potato bugs. The pheasant is the only bird that I know of which will feed upon the bug that destroys the potato vine.

DEER

As I have stated previously, we receive nothing but good reports of the increasing of the deer. I recommend to the Commission the advisability of bringing about an enactment of law making a short open season for the killing of buck deer in the counties of the State which do not enjoy that privilege under the present law.

DUCKS

Without doubt the law which prohibits the spring shooting of ducks is partly accountable for the large number which now hatch and raise their broods within the borders of the State of New York. The department is continually receiving favorable reports showing that this valuable game bird is increasing in number in this State; no doubt owing to the fact that the law is being rigidly enforced relative to shooting out of season, fire lighting, netting, and disturbing the ducks during their breeding season.

QUAIL

I am sorry to be obliged to state that I cannot find where there is any material increase of the quail. I was encouraged to believe that the placing of a five years close season on quail, with the exception of Long Island, would be the means of again replenishing the covers upstate with these excellent game birds; but as they are a seed-eating, ground-feeding bird, they very easily winter kill, particularly during the periods of the year when the ground is deeply covered with snow, as it prevents their readily finding feed. That, in addition to their natural cover

being cut off, causes me to believe that it would not be wise to again allow the killing of quail in this State, with the exception of Long Island, unless there is a greater increase in the supply during the balance of the five years closed period.

BEAVER

Beaver continue to increase in the Adirondack region. Some complaints have come to the department relative to the damage done by beaver by reason of cutting timber and flooding private lands. In some instances, after an investigation of the complaint of damage being done by beaver, we found it necessary to disturb their houses, which causes the colony to seek new quarters.

HUNTING LICENSES

A careful investigation has caused me to believe that the State is not getting the returns from hunting licenses that it should. The report of the protective force shows that a great many hunters go afield without being in possession of a hunting license as provided by law, taking the chances of being apprehended by a protector for hunting without a license. To educate the public to the necessity of being in possession of a hunting license to hunt any of the wild birds or quadrupeds of the State of New York, the game protective force has been ordered when meeting a hunter afield to inspect his hunting license. This has had a tendency to increase the sale of licenses, which has encouraged me to believe that providing for the issuing of a button with every hunting license, to be worn in a conspicuous place, would practically eradicate the practice of hunters going afield without being in possession of their license, as they would not only be open to the inspection of the protective force, but any person could readily see, by the requirement that they should wear the button at all times when hunting, that they were in possession of the necessary license to hunt.

MERIT SYSTEM

I am a great believer in the merit system, as it spurs a protector to give his very best efforts to the work of protecting the

wild life of the State; but believe that the grading of protectors should rest absolutely with this Commission, as they are better able to judge of the men who should be placed in the first grade. At the present time the rating of these men rests with the State Civil Service Commission. The law should be amended so that the rating of the protectors will be the prerogative of the Commission.

SPECIAL PROTECTORS

While I realize the necessity in certain instances for special protectors, especially where a man is acting as a game keeper, or superintendent of a preserve, or is a hatchery foreman or superintendent or foreman of a game farm, except in such instances I am adverse to the appointment of special protectors. Experience has shown that in a great many cases they have but a slight knowledge of the provisions of the conservation law giving protection to fish and game. This has been corrected somewhat by the law which now requires that a person in order to become a special protector must pass a non-competitive examination; but I find that the examination has not been the means of placing the special protectors on a plane with the regulars. This is caused primarily by the fact that a special protector does not give his whole attention to the work of protecting the fish and game, and therefore not being continually brought in contact with the conservation law, is not well acquainted with its provisions. I am thoroughly convinced that with a force of two hundred men, special protectors would be unnecessary. Special protectors are prone to prosecute violations of a very technical nature, for the purpose of deriving a benefit from the moiety which they receive as compensation for their work, which tends to bring the Commission and the law into bad repute.

HUNTING ACCIDENTS

I find that the record shows that during the 1914 deer season there were five deer hunting accidents, three of which were fatal. Not one of these victims, as far as any evidence shows, was mistaken for a deer. Seventeen minor accidents occurred in 1914 while hunters were in pursuit of small game. In my opinion

Cat with Robin — The Enemy of Game and Song Birds

this is the greatest recommendation for the so-called " buck law," as it has a great tendency to save human life. A sportsman afield hunting deer, with the law as it is now framed, is very careful to ascertain if it is a buck that he is shooting at, thereby avoiding hunting accidents, which occurred very often in the past when hunters could kill either a buck or a doe, as a move in the brush meant a shot from the hunter, and too late it was found that he had killed either his guide or his hunting companion.

THE HOUSE CAT

Mr. Edward H. Forbush, State Ornithologist of Massachusetts, makes a claim that a mature cat in good hunting grounds kills on an average fifty birds a year. The old cat that wanders off into the fields and woods is terribly destructive. Mr. William Brewster tells of an acquaintance in Maine who said that his cat killed about fifty birds a year. When asked why he did not get another cat, he said that it would be of no use, for they were all alike. Another gentleman by the name of A. C. Dyke writes that his family owned a cat which was well cared for and a particular pet. They watched it through one season, and found that it killed fifty-eight birds, including the young in five nests. Nearly a hundred correspondents scattered throughout all the counties of the State report the cat as one of the greatest enemies of the birds. There is no doubt that the predatory house cat is one of the destructive enemies to our game and insectivorous birds. I do not hesitate to recommend that a law be enacted providing that "Any person may and it shall be the duty of every game protector to kill cats found afield."

ASSAULTS

On April 5, 1914, Protector Samuel S. Taylor was assaulted and killed in the vicinity of Rome. The following resolution was passed by the Division Chief Protectors at a meeting held at Albany on April 21, 1914:

> " Whereas, the wise hand of Providence has seen fit to remove from our midst, our highly esteemed and respected game protector, Samuel S. Taylor, of Madison county, while in the performance of his duty; and

"Whereas, this faithful servant of the State, while apprehending two foreigners in the act of slaughtering our song birds, and while attempting to arrest the offenders, met his death by the hands of two assassins; now therefore be it

"Resolved, that we, the Division Chiefs of the State of New York, sadly deplore the loss of our dearly beloved brother protector, and extend our regret and sympathy to the parents of Protector Taylor in their sad hours of affliction; also be it

"Resolved, that a copy of these resolutions be extended to his parents, and also that a copy be placed upon the minutes of this meeting."

Special Protector Bert J. Anson of Utica was assaulted by two foreigners on November 1, 1914. In defending his life he killed one of his assailants, and dangerously wounded the other. He was held blameless by Coroner Stephen A. Mahady, after holding an inquest.

GUIDES' LICENSE

Simply as a matter of control, and to assure sportsmen of competent men as guides, I again recommend that the Commission use its best endeavors to bring about an enactment of law providing for the licensing of guides.

FISHWAYS AND DAMS

Section 251 should be so amended that it would give authority to the Commission to post signboards forbidding fishing within fifty rods of any fishway or dam. At the present time the law states that the Commission may prohibit fishing within fifty rods of any dam or fishway erected by the State. This should apply to all dams or fishways, irrespective of whether they are owned by the State or by private interests.

EXPENSES OF PROTECTORS

A larger expense account would mean the greater efficiency of the protective force. I again recommend an increase in the protectors' expenses from $600 to $900 per annum, and the division chief protectors from $750 to $1,000.

COMBINATION HUNTING, FISHING AND TRAPPING LICENSE

In justice to the sportsmen who are paying into the State treasury over $200,000 annually for hunting licenses, I feel that the law should be so amended that it would provide for a combination hunting, fishing and trapping license; exempting minors under sixteen years of age, and women; providing further that the fishing license would only be necessary to take fishes of a species protected by law. There is no doubt that there is a sentiment throughout the State for a combination hunting, fishing and trapping license, particularly on the part of the fishermen who are in sympathy with the policy of this Commission in restocking the streams of our State with our more valuable species of game fishes; realizing as they do that if this work is to be carried on, and upwards of $100,000 is spent every year to maintain fish hatcheries in the State, it is only just and fair that they as well as the hunters pay their share of the burden.

SPEARS AND SETLINES

This method of fishing is very popular among the fishermen who wish to take what is classed as the cull fish, including suckers, bullheads, carp, eels, etc. At the present time it can only be done on an order issued by this Commission. As a matter of control, a small license fee should be required, with a license, and a tag similar to the tag issued with netting licenses could be furnished, to be placed on the setline, or on the handle of the spear; and the license should further provide the species of fish that could be taken with a spear or setline. This not only furnishes a cheap class of food to people in moderate circumstances, but it is the opinion of fish culturists that removing the deleterious fish improves and aids the propagation of the more valuable species of game fish. But without proper control, it would be dangerous to allow the taking of deleterious fish with setlines or spears, as an irresponsible person would not be a respecter of species.

GAME FARMS

The popularity of the pheasant still continues to increase, and it is no doubt one of the coming game birds of the State. At least two additional game farms should be provided for this year.

TAXIDERMISTS' LICENSE

Not as a revenue getter, but purely from the standpoint of control, taxidermists should be required to apply to this Commission for and be granted by it a license to engage in the business of taxidermy.

FEDERAL MIGRATORY BIRD LAW

It is highly important that every effort should be made to harmonize the conflicting provisions of the State Conservation Law and the law giving protection to migratory birds.

FEEDING OF WILD GAME

We find that from year to year the ducks are making the inland waters of the State their winter quarters. This is owing to the rigid protection given to the wild life of the State, which is not being molested or killed during the close season to any great extent. As the waters gradually became frozen over, we found it necessary, in order to preserve the ducks, to have them fed by the protective force of the State. Therefore an appropriation should be made to carry on this work the same as in the past.

Experience has shown that the cutting of the marsh hay and stacking it for the deer has saved a great many of the smaller deer. One of the protectors, in visiting a beaver meadow where hay had been cut and stacked, informed me that there were a great many deer feeding upon the hay, and in fact in the vicinity where the hay was stacked, it looked like a sheep yard. This is true game protection. I trust that there may not be any difficulty in getting a suitable appropriation to carry on this work.

STATE GAME FARM

In closing, I wish to call the Commission's attention to the gradual increase from year to year in the number of pheasants and eggs which are being sent out from the game farm at Sher-

burne, which is the result of the hard and conscientious work done by Mr. Harry T. Rogers. I feel that the Commission has made no mistake in entrusting to Mr. Rogers the superintendency of the other game farms now being established.

Respectfully submitted,

LLEWELLYN LEGGE,
Chief Game Protector.

SECTIONS OF THE CONSERVATION LAW VIOLATED FROM OCTOBER 1, 1913, TO SEPTEMBER 30, 1914

COUNTY	153	176	177	178	180	181	185	190	191	192	193	195	196	198	199
Albany				1		1	13		1						
Allegany		13	1				8						5		4
Broome		41	4				8						2		1
Bronx							2								
Cattaraugus		14	3	1			5								2
Cayuga		12					9						3		4
Chautauqua		10	1				9						4		2
Chemung		21	3				5						1		3
Chenango		9					1								1
Clinton		5	2												
Columbia		2	1				24	7			1		1		3
Cortland		8					5						2		
Delaware		17	7				8			1			7		7
Dutchess		8			1		3						3		
Erie		133	3	1			23						7		
Essex		24					5	1	2		4	3		1	
Franklin	2	7	1				4	3	2		2			1	
Fulton		31	3				7				2		12		
Genesee		9					3						3		
Greene			2				1					1			1
Hamilton		11					4	1	1		2			1	
Herkimer		9	1				7		1				2		
Jefferson		33	7				16		1		1				2
Kings		1		3			5						1		
Lewis		7	1	1	1		13	3			2				9
Livingston		24					23					2	4		4
Madison		11					23							1	2
Monroe		43	2				15						12		
Montgomery		12	2				7								3
Nassau							43					1			
New York		4		22				1	2						
Niagara		33					14								
Oneida		21					27			1					2
Onondaga		50					28						10		
Ontario		16					14						1		
Orange		18	32				7								
Orleans		17					16						4		
Oswego		20					10						4		
Otsego		22										1			1

Putnam	.....	4	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Queens	.....	.....	.....	.....	.....	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rensselaer	.....	4	3	.....	.....	.....	18	.....	.....	.....	.....	.....	3	.....	.....	.....
Richmond	.....	1	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rockland	.....	18	.....	.....	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Lawrence	.....	26	.....	.....	.....	.....	19	3	1	.....	.....	.....	.....	.....	.....	2
Saratoga	.....	25	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	3
Schenectady	.....	3	2	.....	.....	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schoharie	.....	1	.....	.....	.....	.....	3	.....	.....	.....	.....	1	1	.....	.....	.....
Schuyler	.....	3	1	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seneca	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Steuben	.....	5	10	.....	.....	.....	23	.....	.....	.....	.....	.....	.....	2	1	.....
Suffolk	.....	21	10	.....	.....	.....	27	.....	.....	.....	1	.....	1	.....	.....	.....
Sullivan	.....	32	1	.....	.....	.....	10	1	.....	5	.....	1	.....	.....	2	.....
Tioga	.....	20	1	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tompkins	.....	4	2	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	2	.....
Ulster	.....	27	3	1	.....	.....	18	.....	.....	.....	4	.....	.....	.....	.....	.....
Warren	.....	18	.....	.....	.....	.....	7	2	.....	.....	11	.....	.....	.....	.....	7
Washington	.....	12	.....	.....	.....	.....	6	2	.....	.....	2	.....	3	.....	.....	.....
Wayne	.....	28	7	.....	.....	.....	5	.....	.....	.....	.....	.....	7	2	.....	.....
Westchester	.....	37	1	1	.....	.....	29	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	5	1	1	
Yates	.....	11	2	.....	.....	.....	10	.....	.....	.....	.....	.....	3	1	3	
Total	2	1,017	119	31	2	1	685	24	11	7	32	10	111	11	72	

SECTIONS OF THE CONSERVATION LAW VIOLATED FROM OCTOBER 1, 1913, TO SEPTEMBER 30, 1914 — (*Continued*)

COUNTY	201	202	211	212	213	214	216	219	220	221	222	223	230	231	232
Albany															
Allegany			3												
Broome															
Bronx														1	
Cattaraugus	1														
Cayuga	1			2									2		
Chautauqua						1									
Chemung	1					2		3						1	
Chenango	4														
Clinton															
Columbia	1							1							
Cortland															
Delaware	1							1						6	
Dutchess										1					
Erie								6						2	
Essex	4		2					1						1	6
Franklin	2					1									3
Fulton	2	3						3						2	
Genesee	1														
Greene			1												1
Hamilton						1		1						1	1
Herkimer								4							1
Jefferson	2							2					1		
Kings				1				6							
Lewis														1	
Livingston								3					3		
Madison						2		1					1		
Monroe								5							
Montgomery								1						5	
Nassau			2	3				19							
New York						1		7							
Niagara														2	1
Oneida						1		7							
Onondaga								1					1		1
Ontario					2			1				1			
Orange								1							
Orleans															
Oswego															
Otsego			1												
Putnam								1							
Queens								6							

Rensselaer	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Richmond	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Rockland	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
St. Lawrence	1	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....	.....	2
Saratoga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schenectady	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Schoharie	.....	.....	.....	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Schuyler	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Seneca	.....	.....	3	.....	1	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Steuben	2	.....	.....	5	.....	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Suffolk	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sullivan	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tioga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tompkins	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Ulster	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	3	.....	.....	1
Warren	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Washington	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wayne	.....	1	.....	.....	.....	.....	.....	5	.....	.....	1	.....	.....	.....	4	.....	.....	.....
Westchester	4	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming	.....	.....	.....	.....	.....	.....	.....	4	.....	3	.....	.....	.....	.....	.....	.....	.....	.....
Yates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	28	5	13	11	2	15	1	116	3	3	1	1	9	36	18			

SECTIONS OF THE CONSERVATION LAW VIOLATED FROM OCTOBER 1, 1913, TO SEPTEMBER 30, 1914 — (*Continued*)

COUNTY	234	236	237	240	241 rule A	244	245	247	252	253	254	255	257	270	274
Albany													1		
Allegany								1							
Broome							3			1					
Bronx															
Cattaraugus							9	2							
Cayuga															
Chautauqua								1				7		3	
Chemung															
Chenango															
Clinton															
Columbia														6	
Cortland															
Delaware								1		4	3	2	1		
Dutchess															
Erie		2					3						1		
Essex															
Franklin															
Fulton															
Genesee															
Greene															
Hamilton															
Herkimer												2			
Jefferson										1					
Kings															
Lewis															
Livingston															
Madison												1			
Monroe							6							2	
Montgomery		1												2	
Nassau				1											
New York				6											
Niagara							1							1	
Oneida						3		1				2	5	11	
Onondaga										1			1		
Ontario															
Orange															
Orleans								3							
Oswego								1		1					2
Otsego										1				2	
Putnam															
Queens															

Rensselaer							3							2	
Richmond			1												
Rockland															
St. Lawrence								1	5		1	2		2	
Saratoga							1				3			1	1
Schenectady															
Schoharie												2			
Schuyler															
Seneca														1	
Steuben	1						2	4				2			
Suffolk															
Sullivan															
Tioga											2	1			
Tompkins											1			1	
Ulster							1				1				
Warren					2							1	3		
Washington															
Wayne															
Westchester				2											
Wyoming															
Yates															
Total	1	3	1	9	2	3	29	15	5	9	11	22	12	34	3

SECTIONS OF THE CONSERVATIGN LAW VIOLATED FROM OCTOBER 1, 1913, TO SEPTEMBER 30, 1913 — (*Concluded*)

COUNTY	275	276	285	318	321	324	329	330	331	334	362	365	372	373	380	Total
Albany	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17
Allegany	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35
Broome	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	61
Bronx	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Cattaraugus	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37
Cayuga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	32
Chautauqua	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
Chemung	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
Chenango	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
Clinton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Columbia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
Cortland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
Delaware	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
Dutchess	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	22
Erie	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	183
Essex	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
Franklin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
Fulton	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	69
Genesee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16
Greene	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Hamilton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	25
Herkimer	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
Jefferson	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
Kings	.....	.....	.....	.....	13	.....	.....	9	4	.....	.....	.....	.....	.....	.....	43
Lewis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
Livingston	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	63
Madison	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42
Monroe	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	85
Montgomery	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33
Nassau	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	70
New York	.....	.....	.....	.....	11	.....	.....	.....	.....	.....	.....	.....	1	4	.....	59
Niagara	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	53
Oneida	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	84
Onondaga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	93
Ontario	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35
Orange	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	58
Orleans	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
Oswego	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
Otsego	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
Putnam	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
Queens	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27

Rensselaer	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38
Richmond	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
Rockland	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35
St. Lawrence	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	68
Saratoga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
Schenectady	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
Schoharie	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Schuyler	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	13
Seneca	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Steuben	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
Suffolk	.....	.....	.....	3	4	8	.....	.....	.....	9	.....	.....	.....	.....	.....	.....	98
Sullivan	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	52
Tioga	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31
Tompkins	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	18
Ulster	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
Warren	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57
Washington	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28
Wayne	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51
Westchester	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	.....	.....	.....	.....	93
Wyoming	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16
Yates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37
Total	6	1	1	3	29	9	4	9	4	9	5	11	7	4	6		2,664

REGULAR PROTECTORS

DIVISIONS	Number of men in division	Total number of actions	Average number of cases per protector	Gross recovery	Average recovery per case	Total cost	Average cost per case
Metropolitan and Lond Island Division, J. T. McCormick, Division Chief	15	417	28	$6,125 90	$62 66	$747 13	$1 79
Southern Division, W. C. Farley, Division Chief	14	288	21	3,506 90	12 18	291 30	1 01
Western Division, F. W. Hamilton, Division Chief	12	273	23	5,941 20	21 76	540 40	1 98
Ontario Division, J. A. Colloton, Division Chief	10	229	23	5,559 95	24 28	558 61	
St. Lawrence Division, F. C. Mullin, Division Chief	15	198	13	4,197 75	21 20	444 80	2
Hudson Division, C. E. Lee, Division Chief	9	182	20	3,046 55	16 74	246 40	1
Allegany Division, C. R. Stapley, Division Chief	9	170	19	2,365 18	13 91	147 45	
Central New York Division, W. H. Weston, Division Chief	11	156	14	3,152 55	20 21	247 06	1
Southern Adirondack Division, John E. Leavitt, Division Chief	7	127	18	2,642 40	20 81	183 50	1 45
Eastern Division, C. A. Johnston, Division Chief	7	126	18	2,451 30	19 45	377 99	3 00
Eastern Adirondack Division, R. B. Nichols, Division Chief	13	124	10	1,803 20	14 54	422 35	3 41
Northern Adirondack Division, B. A. Cameron, Division Chief	10	77	8	943 50	12 25	239 10	3 11
Case settled by Commission	.....	.....	.....	20,000 00	.....	.....	.....

Average recovery	$26 07
Average cost per case	1 87

SPECIAL PROTECTORS

DIVISIONS	Number of men in division	Total number of actions	Average number of cases per protector	Gross recovery	Average recovery per case	Total cost	Average cost per case
Metropolitan and Long Island Division, J. T. McCormick, Division Chief	7	24	3	$313 00	$13 04	$7 75	$0 32
Southern Division, W. C. Farley, Division Chief	1	2	2	37 00	18 50	1 25	63
Western Division, F. W. Hamilton, Division Chief	6	58	10	971 00	16 74	123 75	2 13
Ontario Division, J. A. Colloton, Division Chief	1	10	10	469 80	46 98	24 80	2 48
St. Lawrence Division, F. C. Mullin, Division Chief	1	2	2	46 50	23 25	1 50	75
Hudson Division, C. E. Lee, Division Chief	2	2	1	21 50	10 75	1 50	75
Allegany Division, C. R. Stapley, Division Chief	3	7	2	128 55	18 36	8 55	1 22
Central New York Division, W. H. Weston, Division Chief	7	94	13	1,938 10	20 62	242 25	2 58
Southern Adirondack Division, John E. Leavitt, Division Chief	6	15	3	252 25	16 81	25 00	1 67
Eastern Division, C. A. Johnston, Division Chief	4	8	2	162 55	20 32	20 40	2 55
Eastern Adirondack Division, R. B. Nichols, Division Chief	1	4	4	64 00	16 00	4 00	1 00
Northern Adirondack Division, B. A. Cameron, Division Chief	1	11	11	206 00	18 73	14 90	1 35

Average recovery	$19 45
Average cost per case	2 00

REPORT OF THE CHIEF GAME PROTECTOR

REGULAR PROTECTORS	Actions bought	Recovery	Court costs	Constable fees	Attorneys' fees	Other charges	Total costs
Thos. H. Allen	26	$314 35	$47 25	$3 00			$50 25
A. B. Allison	30	498 70	18 80				18 80
W. J. Andre	23	499 75	50 35	3 50	$17 50		71 35
Benj. M. Bailey	44	457 00	81 70	6 25		$8 00	95 95
J. E. Ball	2	38 70	3 70				3 70
Jos. Barry	28	326 35	12 20				12 20
F. Bauerschmidt	19	201 65	12 40				12 40
Carl A. Beebe	16	243 25	12 25				12 25
W. G. Bell	14	252 50	12 45	5 00	26 50		43 95
F. H. Bellinger	13	264 25	9 00				9 00
D. H. W. Benson	50	725 90	42 15	4 25			46 40
H. W. Billings	33	619 25	51 25	12 65			63 90
C. A. Bissell							
Dennis Bump	19	220 00	28 60	24 95			53 55
L. H. Burnside	15	166 40	6 40				6 40
P. F. Butler	24	511 65	25 15	15 40		32	40 87
W. J. Butler	5	64 00	5 85				5 85
M. J. Callahan	2	58 25	3 15				3 15
M. L. Callaghan	37	716 50	81 63	10 90	20 00	13 60	126 13
Byron A. Cameron	14	182 50	34 85	3 20			38 05
Z. T. Cater	1	11 30	1 30				1 30
W. R. Clark	16	220 00	29 15	11 35	12 00	3 00	55 50
W. D. Cloyes	21	238 80	12 80				12 80
A. J. Conklin	15	209 25	9 00	3 50			12 50
J. A. Colloton	5	123 50	3 50		15 00		18 50
E. C. Cross	46	756 85	35 60				35 60
H. B. Cruikshank	9	186 00	25 70	18 85	40 00		84 55
C. C. Culver	26	270 30	11 85				11 85
Harry Curry	42	498 15	32 50	3 75	40 10		76 35
Geo. Davis	15	357 50	33 70	18 00	15 88	5 00	72 58
W. L. Delaney	7	172 00	7 50		5 00		12 50
J. M. DeSilva	33	355 35	22 70				22 70
Fred DeWitt	42	737 65	34 50	1 75		2 00	38 25
H. C. DeWolf	6	197 10	14 20		20 00		34 20
John Dollinger	16	278 00	8 00				8 00
C. T. DoVille	30	511 50	39 75		10 00		49 75
E. B. Downing	26	510 50	44 00				44 00
Calvin Emerick	1	10 00	50				50
W. C. Farley							
C. J. Franklin	1	25 00	5 55				5 55
J. S. Ford	5	32 50	4 45				4 45
M. V. Fordham	18	192 75	13 50				13 50
Edmund Gallagher	43	632 75	7 75				7 75
E. H. Gammon	42	929 00	90 25	4 70	36 00		130 95
J. A. Ginder	44	936 60	89 50	15 60		5 00	110 10
E. C. Gleason	21	338 85	17 95			1 95	19 90
Theo. Godbout	13	182 20	21 45	4 55			26 00
Harry P. Haff	14	208 00	11 70	3 50			15 20
Jay Hand	19	444 00	18 00				18 00
F. W. Hamilton	35	1,301 25	41 15	3 80	5 00		49 95
A. G. Harris	20	447 50	16 35	1 10			17 45
Miles Hazelton	14	449 95	17 60	70	11 00	5 50	34 80
Henry Heffernan	33	452 10	21 40	95			22 35
Wm. Herrick	9	199 00	9 00				9 00
Edgar Hicks	30	812 00	2 00				2 00
C. M. Hiller	8	129 40	3 60				3 60
Jas. H. Hildreth	10	154 00	12 50				12 50
J. F. Hirsch	17	328 85	14 35				14 35
W. A. Hoagland	31	699 00	38 10	10 75			48 85
Fred Hoffman	26	505 00	38 60		60 00		98 60
H. A. Horton	21	324 60	28 50	70 90			99 40
Geo. B. Howland	8	232 00	13 85	2 15			16 00
Jos. Jenkins	10	115 05	11 05	3 45	11 45		25 95
C. A. Johnston	36	524 45	105 90	68 97		18 00	192 87
John H. Kane	15	271 80	9 05				9 05
D E. Keefe	16	153 40	9 35			4 75	14 10
C. J. Kirby	8	23 00	23 05				23 05
E. J. Knapp	45	623 15	76 00	3 75	25 00		104 75
M. S. B. Knights	26	489 50	30 95	1 85			32 80
Peter Knobloch	8	283 00	18 00				18 00
V. J. Kohl	22	398 95	29 20			5 00	34 20
John E. Leavitt							

REPORT OF THE CHIEF GAME PROTECTOR — *Concluded:*

REGULAR PROTECTORS	Actions bought	Recovery	Court costs	Constable fees	Attorneys' fees	Other charges	Total costs
Chas. E. Lee							
M. B. Leland	8	$44 00	$15 70	$12 00	$30 00		$57 70
D. W. Linnehan	1	11 00	1 00				1 00
Daniel Lynn	1		1 75				1 75
John T. McCormick	5	110 00	5 00				5 00
J. J. McDonough	6	92 50	8 50				8 50
R. F. Maher	17	289 25	38 90	23 00	10 00	$2 00	73 90
John H. Mallette	14	201 35	23 25	13 10	10 00		46 35
Thos. E. Marsh	24	575 60	36 05				36 05
C. H. Masten	28	534 40	33 45	2 00			35 45
C. J. Miles	18	430 70	15 45				15 45
L. S. Morris	22	407 08	27 45	5 00			32 45
D. E. Moxley	5	92 50	7 50				7 50
F. C. Mullin	4	222 10	2 10				2 10
M. C. Murphy	31	362 00	24 75				24 75
Wm. F. Newell	16	366 95	11 95				11 95
R. B. Nichols	6	125 00	5 00				5 00
Ed. P. Nolan	11	318 25	21 33	9 96		7 96	39 25
Jos. Northup	5	102 50	2 50				2 50
J. H. North	2	15 00	4 55	19 80	68 40		92 75
Frank O'Brien	4	46 45	1 45				1 45
E. J. O'Connor	28	250 00	23 45				23 45
C. H. O'Donnell	45	1,530 15	63 40	9 40			72 80
E. R. Overton	29	393 00	48 60	63 65	57 67	2 00	171 92
L. W. Paxon	26	606 10	47 25	7 40	42 50		97 15
S. R. Phillips	1	10 00					
John S. Pike	7	124 50	7 10	25			7 35
C. J. Quick	2	21 00	1 00				1 00
Chas. Riley	2	75 00					
R. W. Schulz	2		25 00				25 00
Edwin St. Clair	2	25 00	3 25				3 25
N. A. Scott	15	211 00	25 40		30 00		55 40
S. S. Scott	27	363 65	23 25				23 25
D. W. Seckington	19	255 50	27 45	1 25			28 70
T. J. Sheridan	18	255 00	36 40	5 35	35 60		77 35
J. T. Smith	12	222 00	28 35	21 15	46 00		95 50
M. S. Smith	10	239 55	14 50				14 50
Robert Somerville	15	180 50	25 30	4 40			29 70
A. Stadlmeier	40	625 40	27 15		10 00		37 15
Chas. R. Stapley	27	362 75	25 60	5 75			31 35
Clark M. Stearne	33	900 00	27 55		42 00		69 55
Geo. E. Sutton	13	175 00	15 00				15 00
S. S. Taylor	20	259 06	19 11	2 50			21 61
F. G. Thomas	20	242 50	41 35				41 35
Geo. H. Travis	39	890 70	32 10	2 60			34 70
C. E. Underhill	46	869 30	66 85	23 45			90 30
John B. Vann	15	206 20	28 50				28 50
Frank Van de Boe	13	285 30	15 00	5 35			20 35
Peter Ver Snyder	10	177 00	23 35	5 00	2 50		30 85
J. H. Wackerman	43	638 00	64 06	5 80	26 25		96 11
Geo. S. Wagoner	1	25 50	50				50
John J. Ward	25	356 50	12 50				12 50
Merton Wescott	22	300 36	21 91	11 20	15 00		48 11
C. Wheaton	15	292 40	7 40				7 40
Wm. H. Weston							
John Willis	11	284 60	13 86	7 60			21 46
Wm. C. Wood							
C. G. Worden	23	610 78	25 48	4 00	10 00		39 48
Chas. H. Yaple	16	188 05	26 90				26 90
V. A. Zimmer	8	95 10	5 15				5 15
Case settled by Commission	1	20,000 00					
Totals	2,368	$61,736 38	$2,941 68	$613 98	$806 35	$84 08	$4,446 09

RESULTS OF ACTIONS

REGULAR PROTECTORS	Fined	Sentences suspended	Jail	Acquittals	John Doe Proceedings	Discontinued	Jury disagreed	Total
Thos. H. Allen	19	5	1	.....	.....	1	.....	26
A. B. Allison	27	2	.....	.....	1	.....	.....	30
W. J. Andre	19	1	.....	.....	2	1	.....	23
Benj. M. Bailey	31	9	.....	4	.....	.....	.....	44
J. E. Ball	2	.....	.....	.....	.....	.....	.....	2
Jos. Barry	24	3	.....	.....	1	.....	.....	28
F. Bauernschmidt	14	4	.....	.....	.....	1	.....	19
Carl A. Beebe	15	1	.....	.....	.....	.....	.....	16
W. G. Bell	12	2	.....	.....	.....	.....	.....	14
F. H. Bellinger	13	.....	.....	.....	.....	.....	.....	13
D. H. W. Benson	43	5	.....	1	.....	1	.....	50
H. W. Billings	26	4	.....	1	.....	2	.....	33
C. A. Bissell	.....	.....	.....	.....	.....	.....	.....	.....
Dennis Bump	11	.....	1	.....	1	6	.....	19
L. H. Burnside	14	1	.....	.....	.....	.....	.....	15
P. F. Butler	21	1	.....	2	.....	.....	.....	24
W. J. Butler	4	.....	.....	.....	1	.....	.....	5
M. J. Callahan	2	.....	.....	.....	.....	.....	.....	2
M. L. Callaghan	32	1	.....	1	3	.....	.....	37
Byron A. Cameron	6	.....	.....	.....	8	.....	.....	14
Z. T. Cater	1	.....	.....	.....	.....	.....	.....	1
W. R. Clark	14	.....	.....	1	.....	1	.....	16
W D. Cloyes	19	2	.....	.....	.....	.....	.....	21
A. J. Conklin	15	.....	.....	.....	.....	.....	.....	15
J. A. Colloton	4	.....	.....	.....	.....	1	.....	5
E. C. Cross	45	.....	.....	.....	1	.....	.....	46
H. B. Cruikshank	7	.....	.....	1	.....	1	.....	9

RESULTS OF ACTIONS — *Continued*

REGULAR PROTECTORS	Fined	Sentences suspended	Jail	Acquittals	John Doe Proceedings	Discontinued	Jury disagreed	Total
C. C. Culver	23	1			2			26
Harry Curry	34	4	1	1		2		42
George Davis	12		1	2				15
W. L. Delaney	6			1				7
J. M. DeSilva	28	3	1		1			33
Fred DeWitt	38		3		1			42
H. C. DeWolf	4			1	1			6
John Dollinger	15	1						16
C. T. Doville	23	1		1	5			30
E. B. Downing	23	3						26
Calvin Emerick	1							1
W. C. Farley								
C. J. Franklin	1							1
J. S. Ford	3				2			5
M. V. Fordham	17	1						18
Edmund Gallagher	38	5						43
E. H. Gammon	36	3	2		1			42
J. A. Ginder	40	4						44
E. C. Gleason	19	1			1			21
Theo. Godbout	12	1						13
Harry P. Haff	14							14
Jay Hand	19							19
F. W. Hamilton	31	2			2			35
A. G. Harris	19	1						20
Miles Hazelton	13				1			14
Henry Heffernan	31	2						33
William Herrick	9							9
Edgar Hicks	30							30

C. M. Hiller	8	.....	.....	.....	.....	.....	.....	8
Jas. H. Hildreth	9	1	.....	.....	.....	.....	.....	10
J. F. Hirsch	17	.....	.....	.....	.....	.....	.....	17
W. A. Hoagland	28	1	1	1	.....	.....	.....	31
Fred Hoffman	23	.....	1	2	.....	.....	.....	26
H. A. Horton	19	1	.....	1	.....	.....	.....	21
Geo. B. Howland	8	.....	.....	.....	.....	.....	.....	8
Jos. Jenkins	7	2	.....	1	.....	.....	.....	10
C. A. Johnston	25	9	2	.....	.....	.....	.....	36
John H. Kane	15	.....	.....	.....	.....	.....	.....	15
D. E. Keefe	13	2	.....	.....	1	.....	.....	16
C. J. Kirby	2	2	.....	.....	4	.....	.....	8
E. J. Knapp	39	5	.....	1	.....	.....	.....	45
M. S. B. Knights	24	.....	1	.....	1	.....	.....	26
Peter Knobloch	8	.....	.....	.....	.....	.....	.....	8
V. J. Kohl	22	.....	.....	.....	.....	.....	.....	22
John E. Leavitt	.....	.....	.....	.....	.....	.....	.....	.....
Chas. E. Lee	.....	.....	.....	.....	.....	.....	.....	.....
M. B. Leland	4	2	.....	1	1	.....	.....	8
D. W. Linnehan	1	.....	.....	.....	.....	.....	.....	1
Daniel Lynn	.....	.....	1	.....	.....	.....	.....	1
John T. McCormick	5	.....	.....	.....	.....	.....	.....	5
J. J. McDonough	5	1	.....	.....	.....	.....	.....	6
R. F. Maher	13	4	.....	.....	.....	.....	.....	17
John H. Mallette	11	.....	.....	3	.....	.....	.....	14
Thos. E. Marsh	21	1	.....	.....	2	.....	.....	24
C. H. Masten	27	1	.....	.....	.....	.....	.....	28
C. J. Miles	18	.....	.....	.....	.....	.....	.....	18
L. S. Morris	21	.....	1	.....	.....	.....	.....	22
D. E. Moxley	5	.....	.....	.....	.....	.....	.....	5
F. C. Mullin	4	.....	.....	.....	.....	.....	.....	4
M. C. Murphy	29	.....	.....	.....	2	.....	.....	31
Wm. F. Newell	16	.....	.....	.....	.....	.....	.....	16
R. B. Nichols	6	.....	.....	.....	.....	.....	.....	6
E. P. Nolan	11	.....	.....	.....	.....	.....	.....	11
Jos. Northrup	5	.....	.....	.....	.....	.....	.....	5

RESULTS OF ACTIONS — *Concluded*

REGULAR PROTECTORS	Fined	Sentences suspended	Jail	Acquittals	John Doe Proceedings	Discontinued	Jury disagreed	Total
J. H. North	1			1				2
Frank O'Brien	4							4
E. J. O'Connor	23	4			1			28
C. H. O'Donnell	45							45
E. R. Overton	26	2		1				29
L. W. Paxon	21	1	1		2	1		26
S. R. Phillips	1							1
John S. Pike	6		1					7
C. J. Quick	2							2
Charles Riley	2							2
R. W. Schulz			2					2
Edwin St. Clair	1	1						2
N. A. Scott	9	2		3	1			15
S. S. Scott	25	2						27
D. W. Seckington	18				1			19
T. J. Sheridan	14	1		2	1			18
J. T. Smith	10			1	1			12
M. S. Smith	10							10
Robert Somerville	11	1	2		1			15
A. Stadlmeier	27	12		1				40
Chas. R. Stapley	25	2						27
Clark M. Stearne	32			1				33
Geo. E. Sutton	13							13
S. S. Taylor	17	3						20
F. G. Thomas	13	5	1		1			20
George H. Travis	34	4			1			39
C. E. Underhill	34				11	1		46

John B. Vann	12	.....	1	.....	1	1	.....	15
Frank Van de Boe	13	.....	.....	.....	.....	.....	.....	13
Peter Ver Snyder	9	.....	.....	.....	1	.....	.....	10
J. H. Wackermann	35	1	5	2	.....	.....	.....	43
Geo. S. Wagoner	1	.....	.....	.....	.....	.....	.....	1
John J. Ward	25	.....	.....	.....	.....	.....	.....	25
Merton Westcott	17	2	.....	2	.....	.....	1	22
C. Wheaton	14	1	.....	.....	.....	.....	.....	15
Wm. H. Weston	.....	.....	.....	.....	.....	.....	.....	.....
John Willis	10	.....	1	.....	.....	.....	.....	11
Wm. C. Wood	.....	.....	.....	.....	.....	.....	.....	.....
C. G. Worden	18	3	1	1	.....	.....	.....	23
Chas. H. Yaple	12	2	1	.....	1	.....	.....	16
V. A. Zimmer	8	.....	.....	.....	.....	.....	.....	8
Case settled by commission	1	.....	.....	.....	.....	.....	.....	.....
Totals	2,047	155	33	42	70	20	1	2,368

SUMMARY

RECOVERIES AND EXPENSES

	Fines and penalties	Expense of prosecution
Regular protectors	$61,736 38	$4,446 09
Special protectors	4,610 25	475 65
Total	$66,346 63	$4,921 74

SUMMARY OF RESULTS OF ACTIONS BROUGHT

	Regular protectors	Special protectors	Total
Fined	2,047	209	2,255
Jail	33	8	41
John Doe proceedings	70	.....	70
Sentences suspended	155	12	167
Acquitted	42	4	46
Discontinued	20	4	24
Jury disagreed	1	.....	1
Total	2,368	237	2,604

REPORT OF THE CHIEF GAME PROTECTOR

SPECIAL PROTECTORS	Actions brought	Recovery	Court costs	Constable fees	Attorneys' fees	Total costs
B. J. Anson	28	$519 50	$54 70	$12 70	$10 00	$77 40
M. E. Ballard	1	11 50	1 50			1 50
R. H. Bell	1					
H. D. Birkmire	6	65 00	5 00			5 00
John D. Black	2	53 00	3 00		10 00	13 00
Wm. Blackie	2	25 00	2 75	2 00		4 75
John C. Blunck	6	103 25	5 25			5 25
Frank Bond	7	293 25	12 00	5 70	25 40	43 10
Geo. Brier	6	150 00	10 00		13 30	23 30
James Bullard	2	30 00	2 80	3 20		6 00
W. H. Bundenthal	21	556 50	39 20			39 20
E. Chamberlain	2	46 50	1 50			1 50
Henry Con	1	20 00				
Allen Cooper	1	12 85	85		2 00	2 85
Ernest Fish	4	64 00	4 00			4 00
W. R. Floyd	7	75 10	18 45	6 90	10 00	35 35
Arthur M. Gage	1	13 00	3 00			3 00
E. W. Gauding	1	17 50	2 50			2 50
W. R. Gibbs	2	21 00	1 00			1 00
G. K. Gills	1	10 00				
James Graham	15	245 00				
F. J. Maloney	4	76 75	6 75			6 75
Philip Manecke	2	20 00				
John E. Moak	1	20 00	1 75			1 75
James B. Moffatt	1	10 55	55			55
James F. Mooney	3	50 00	12 85			12 85
Robert L. Moore	1	37 75	2 75			2 75
Chas. H. Nesley	2	71 55	3 20	3 35		6 55
D. B. Oughterson	2	41 25	1 25			1 25
Ray E. Parker	1	11 50	50			50
John L. Perry	28	554 00	48 00			48 00
Sam M. Perry	2	37 00	1 25			1 25
Wm. J. Rauch, Jr	2					
H. E. Robinson	1	26 00	4 15	5 85		10 00
Fred T. Schmidt	10	469 80	24 80			24 80
A. Stadlmeier	10	66 00	11 20			11 20
Wm. M. Stearns	11	206 00	14 90			14 90
Robert Suor	33	497 50	61 20			61 20
J. F. Welden	5	72 65	2 65			2 65
Louis H. Weed	1	10 00				
Total	237	$4,610 25	$365 25	$39 70	$70 70	$475 65

RESULT OF ACTIONS

SPECIAL PROTECTORS	Fined	Sentences suspended	Jail	Acquittals	Discontinued	Total
B. J. Anson	23	1	2	1	1	28
M. E. Ballard	1					1
R. H. Bell			1			1
H. D. Birkmire	6					6
John D. Black	2					2
William Blackie	1		1			2
John C. Blunck	6					6
Frank Bond	6			1		7
Geo. Brier	6					6
James Bullard	2					2
W. H. Bundenthal	20	1				21
E. Chamberlain	2					2
Henry Con	1					1
Allen Cooper	1					1
Ernest Fish	4					4
W. R. Floyd	5		1	1		7
Arthur M. Gage	1					1
E. W. Gauding	1					1
W. R. Gibbs	2					2
G. K. Gills	1					1
James Graham	15					15
F. J. Maloney	4					4
Philip Manecke	2					2
John E. Moak	1					1
James B. Moffatt	1					1
James F. Mooney	2	1				3
Robert L. Moore	1					1
Chas. H. Nesley	2					2
D. B. Oughterson	2					2
Ray E. Parker	1					1
John L. Perry	27	1				28
Sam M. Perry	2					2
Wm. J. Rauch, Jr		1		1		2
H. E. Robinson	1					1
Fred T. Schmidt	10					10
A. Stadlmeier	5	4	1			10
Wm. M. Stearns	9	2				11
Robert Suor	27	1	2		3	33
J. F. Welden	5					5
Louis H. Weed	1					1
Totals	209	12	8	4	4	237

RECORDS OF DIVISIONS, REGULAR PROTECTORS

REGULAR PROTECTORS	Number cases	Recovery	Court costs	Constable fees	Attorneys' fees	Other charges	Total costs
JOHN T. MCCORMICK, DIVISION CHIEF, METROPOLITAN AND LONG ISLAND DIVISION							
Thos. H. Allen	26	$314 35	$47 25	$3 00			$50 25
B. M. Bailey	44	457 00	81 70	6 25		$8 00	95 95
Fred Bauerschmidt	19	201 65	12 40				12 40
D. H. W. Benson	50	725 90	42 15	4 25			46 40
Edmund Gallagher	43	632 75	7 75				7 75
H. P. Haff	14	208 00	11 70	3 50			15 20
Edgar Hicks	30	812 00	2 00				2 00
J. H. Hildreth	10	154 00	12 50				12 50
H. A. Horton	21	324 60	28 50	70 90			99 40
E. J. Knapp	45	623 15	76 00	3 75	$25 00		104 75
John T. McCormick	5	110 00	5 00				5 00
E. R. Overton	29	393 00	48 60	63 65	57 67	2 00	171 92
Geo. E. Sutton	13	175 00	15 00				15 00
J. H. Wackerman	43	638 00	64 06	5 80	26 25		96 11
John J. Ward	25	356 50	12 50				12 50
Total	417	$6,125 90	$467 11	$161 10	$108 92	$10 00	$747 13
WILLIAM C. FARLEY, DIVISION CHIEF, SOUTHERN DIVISION							
A. B. Allison	30	$498 70	$18 80				$18 80
L. H. Burnside	15	166 40	6 40				6 40
M. J. Callahan	2	58 25	3 15				3 15
W. D. Cloyes	21	238 80	12 80				12 80
Harry Curry	42	498 15	32 50	$3 75	$40 10		76 35
J. M. De Silva	33	355 35	22 70				22 70
W. C. Farley							
M. V. Fordham	18	192 75	13 50				13 50
E. C. Gleason	21	338 85	17 95			$1 95	19 90
D. E. Keefe	16	153 40	9 35			4 75	14 10
M. C. Murphy	31	362 00	24 75				24 75
E. J. O'Connor	28	250 00	23 45				23 45
John B. Vann	15	206 20	28 50				28 50
Charles H. Yaple	16	188 05	26 90				26 90
Total	288	$3,506 90	$240 75	$3 75	$40 10	$6 70	$291 30
FREDERICK W. HAMILTON, DIVISION CHIEF, WESTERN DIVISION							
H. W. Billings	33	$619 25	$51 25	$12 65			$63 90
W. R. Clark	16	220 00	29 15	11 35	$12 00	$3 00	55 50
F. W. Hamilton	35	1,301 25	41 15	3 80	5 00		49 95
J. F. Hirsch	17	328 85	14 35				14 35
Fred Hoffman	26	505 00	38 60		60 00		98 60
M. S. B. Knights	26	489 50	30 95	1 85			32 80
T. E. Marsh	24	575 60	36 05				36 05
C. J. Miles	18	430 70	15 45				15 45
L. W. Paxon	26	606 10	47 25	7 40	42 50		97 15
R. W. Schulz	2		25 00				25 00
M. S. Smith	10	239 55	14 50				14 50
A. Stadlmeier	40	625 40	27 15		10 00		37 15
Total	273	$5,941 20	$370 85	$37 05	$129 50	$3 00	$540 40
JAMES A. COLLOTON, DIVISION CHIEF, ONTARIO DIVISION							
M. L. Callaghan	37	$716 50	$81 63	$10 90	$20 00	$13 60	$126 13
J. A. Colloton	5	123 50	3 50		15 00		18 50
George Davis	15	357 50	33 70	18 00	15 88	5 00	72 58
H. C. DeWolf	6	197 10	14 20		20 00		34 20
C. T. DoVille	30	511 50	39 75		10 00		49 75
E. H. Gammon	42	929 00	90 25	4 70	36 00		130 95
Peter Knobloch	8	283 00	18 00				18 00
C. H. O'Donnell	45	1,530 15	63 40	9 40			72 80
C. J. Quick	2	21 00	1 00				1 00
George H. Travis	39	890 70	32 10	2 60			34 70
Total	229	$5,559 95	$377 53	$45 60	$116 88	$18 60	$558 61

RECORDS OF DIVISIONS, REGULAR PROTECTORS — *Continued*

REGULAR PROTECTORS	Number cases	Recovery	Court costs	Constable fees	Attorneys' fees	Other charges	Total costs
F. C. MULLIN, DIVISION CHIEF, ST. LAWRENCE DIVISION							
W. J. Andre	23	$499 75	$50 35	$3 50	$17 50		$71 35
J. E. Bell	2	38 70	3 70				3 70
W. G. Bell	14	252 50	12 45	5 00	26 50		43 95
John Dollinger	16	278 00	8 00				8 00
Jay Hand	19	444 00	18 00				18 00
A. G. Harris	20	447 50	16 35	1 10			17 45
Joseph Jenkins	10	115 05	11 05	3 45	11 45		25 95
J. H. Kane	15	271 80	9 05				9 05
John H. Mallette	14	201 35	23 25	13 10	10 00		46 35
F. C. Mullin	4	222 10	2 10				2 10
J. Northup	5	102 50	2 50				2 50
J. T. Smith	12	222 00	28 35	21 15	46 00		95 50
Clark M. Stearne	33	900 00	27 55		42 00		69 55
P. Ver Snyder	10	177 00	23 35	5 00	2 50		30 85
George S. Wagoner	1	25 50	50				50
Total	198	$4,197 75	$236 55	$52 30	$155 95		$444 80
CHARLES E. LEE, DIVISION CHIEF, HUDSON DIVISION							
Joseph Barry	28	$326 35	$12 20				$12 20
A. J. Conklin	15	209 25	9 00	$3 50			12 50
E. C. Cross	46	756 85	35 60				35 60
Fred DeWitt	42	737 65	34 50	1 75		$2 00	38 25
C. Emerick	1	10 00	50				50
V. J. Kohl	22	398 95	29 20			5 00	34 20
Charles E. Lee							
R. F. Maher	17	289 25	38 90	23 00	$10 00	2 00	73 90
E. P. Nolan	11	318 25	21 33	9 96		7 96	39 25
Total	182	$3,046 55	$181 23	$38 21	$10 00	$16 96	$246 40
C. R. STAPLEY, DIVISION CHIEF, ALLEGANY DIVISION							
Carl A. Beebe	16	$243 25	$12 25				$12 25
C. C. Culver	26	270 30	11 85				11 85
H. Heffernan	33	452 10	21 40	$0 95			22 35
L. S. Morris	22	407 08	27 45	5 00			32 45
Frank O'Brien	4	46 45	1 45				1 45
John S. Pike	7	124 50	7 10	25			7 35
S. S. Scott	27	363 65	23 25				23 25
Chas. R. Stapley	27	362 75	25 60	5 75			31 35
V. A. Zimmer	8	95 10	5 15				5 15
Total	170	$2,365 18	$135 50	$11 95			$147 45
W. H. WESTON, DIVISION CHIEF, CENTRAL NEW YORK DIVISION							
F. H. Bellinger	13	$264 25	$9 00				$9 00
E. B. Downing	26	510 50	44 00				44 00
C. J. Franklin	1	25 00	5 55				5 55
William Herrick	9	199 00	9 00				9 00
W. A. Hoagland	31	699 00	38 10	$10 75			48 85
S. S. Taylor	20	259 06	19 11	2 50			21 61
Merton Wescott	22	300 36	21 91	11 20	$15 00		48 11
Wm. H. Weston							
John Willis	11	284 60	13 86	7 60			21 46
Wm. C. Wood							
C. G. Worden	23	610 78	25 48	4 00	10 00		39 48
Total	156	$3,152 55	$186 01	$36 05	$25 00		$247 06

RECORDS OF DIVISIONS, REGULAR PROTECTORS — *Concluded*

REGULAR PROTECTORS	Number cases	Recovery	Court costs	Constable fees	Attorneys' fees	Other charges	Total costs
J. E. LEAVITT, DIVISION CHIEF, SOUTHERN ADIRONDACK DIVISION							
Miles Hazelton	14	$449 95	$17 60	$0 70	$11 00	$5 50	$34 80
C. M. Hiller	8	129 40	3 60				3 60
John E. Leavitt							
C. H. Masten	28	534 40	33 45	2 00			35 45
W. F. Newell	16	366 95	11 95				11 95
C. E. Underhill	46	869 30	66 85	23 45			90 30
C. Wheaton	15	292 40	7 40				7 40
Total	127	$2,642 40	$140 85	$26 15	$11 00	$5 50	$183 50
C. A. JOHNSTON, DIVISION CHIEF, EASTERN DIVISION							
P. F. Butler	24	$511 65	$25 15	$15 40		$0 32	$40 87
Z. T. Cater	1	11 30	1 30				1 30
W. L. Delaney	7	172 00	7 50		$5 00		12 50
J. A. Ginder	44	936 60	89 50	15 60		5 00	110 10
C. A. Johnston	36	524 45	105 90	68 97		18 00	192 87
S. R. Phillips	1	10 00					
F. Van de Boe	13	285 30	15 00	5 35			20 35
Total	126	$2,451 30	$244 35	$105 32	$5 00	$23 32	$377 99
R. B. NICHOLS, DIVISION CHIEF, ADIRONDACK DIVISION							
Dennis Bump	19	$220 00	$28 60	$24 95			$53 55
W. J. Butler	5	64 00	5 85				5 85
H. B. Cruikshank	9	186 00	25 70	18 85	$40 00		84 55
Theodore Godbout	13	182 20	21 45	4 55			26 00
G. B. Howland	8	232 00	13 85	2 15			16 00
M. B. Leland	8	44 00	15 70	12 00	30 00		57 70
D. W. Linnehan	1	11 00	1 00				1 00
Daniel Lynn	1		1 75				1 75
J. J. McDonough	6	92 50	8 50				8 50
R. B. Nichols	6	125 00	5 00				5 00
N. A. Scott	15	211 00	25 40		30 00		55 40
T. J. Sheridan	18	255 00	36 40	5 35	35 60		77 35
Robert Somerville	15	180 50	25 30	4 40			29 70
Total	124	$1,803 20	$214 50	$72 25	$135 60		$422 35
BYRON A. CAMERON, DIVISION CHIEF, NORTHERN ADIRONDACK DIVISION							
C. A. Bissell							
Byron A. Cameron	14	$182 50	$34 85	$3 20			$38 05
J. S. Ford	4	32 50	4 45				4 45
C. J. Kirby	8	23 00	23 05				23 05
D. E. Moxley	5	92 50	7 50				7 50
J. H. North	2	15 00	4 55	19 80	$68 40		92 75
Charles Riley	2	75 00					
Edwin St. Clair	2	25 00	3 25				3 25
D. W. Seckington	19	255 50	27 45	1 25			28 70
F. G. Thomas	20	242 50	41 35				41 35
Total	77	$943 50	$146 45	$24 25	$68 40		$239 10

RECORDS OF DIVISIONS, SPECIAL PROTECTORS

SPECIAL PROTECTORS	Number cases	Recovery	Court costs	Constable fees	Attorneys' fees	Total costs
JOHN T. MCCORMICK, DIVISION CHIEF, METROPOLITAN AND LONG ISLAND DIVISION						
R. H. Bell	1					
William Blackie	2	$25 00	$2 75	$2 00		$4 75
Arthur M. Gage	1	13 00	3 00			3 00
G. K. Gills	1	10 00				
James Graham	15	245 00				
Phillip Manecke	2	20 00				
Wm. J. Rauch, Jr	2					
Total	24	$313 00	$5 75	$2 00		$7 75
WILLIAM C. FARLEY, DIVISION CHIEF, SOUTHERN DIVISION						
Sam M. Perry	2	$37 00	$1 25			$1 25
FRED'K W. HAMILTON, DIVISION CHIEF, WESTERN DIVISION						
H. D. Birkmire	6	$65 00	$5 00			$5 00
Frank Bond	7	293 25	12 00	$5 70	$25 40	43 10
Robert L. Moore	1	37 75	2 75			2 75
Ray E. Parker	1	11 50	50			50
A. Stadlmeier	10	66 00	11 20			11 20
Robert Suor	33	497 50	61 20			61 20
Total	58	$971 00	$92 65	$5 70	$25 40	$123 75
JAMES A. COLLOTON, DIVISION CHIEF, ONTARIO DIVISION						
Fred T. Schmidt	10	$469 80	$24 80			$24 80
F. C. MULLIN, DIVISION CHIEF, ST. LAWRENCE DIVISION						
E. Chamberlain	2	$46 50	$1 50			$1 50
CHARLES E. LEE, DIVISION CHIEF, HUDSON DIVISION						
M. E. Ballard	1	$11 50	$1 50			$1 50
L. H. Weed	1	10 00				
Total	2	$21 50	$1 50			$1 50
C. R. STAPLEY, DIVISION CHIEF, ALLEGANY DIVISION						
F. J. Maloney	4	$76 75	$6 75			$6 75
James B. Moffatt	1	10 55	55			55
D. B. Oughterson	2	41 25	1 25			1 25
Total	7	$128 55	$8 55			$8 55
W. H. WESTON, DIVISION CHIEF, CENTRAL NEW YORK DIVISION						
B. J. Anson	28	$519 50	$54 70	$12 70	$10 00	$77 40
John D. Black	2	53 00	3 00		10 00	13 00
George Brier	6	150 00	10 00		13 30	23 30
James Bullard	2	30 00	2 80	3 20		6 00
W. H. Bundenthal	21	556 50	39 20			39 20
W. R. Floyd	7	75 10	18 45	6 90	10 00	35 35
John L. Perry	28	554 00	48 00			48 00
Total	94	$1,938 10	$176 15	$22 80	$43 30	$242 25

RECORDS OF DIVISIONS, SPECIAL PROTECTORS — *Concluded*

SPECIAL PROTECTORS	Number cases	Recovery	Court costs	Constable fees	Attorneys' fees	Total costs
J. E. LEAVITT, DIVISION CHIEF, SOUTHERN ADIRONDACK DIVISION						
John C. Blunck	6	$103 25	$5 25	.....	.....	$5 25
Allen Cooper	1	12 85	85	.....	$2 00	2 85
E. W. Gauding	1	17 50	2 50	.....	.....	2 50
John E. Moak	1	20 00	1 75	.....	.....	1 75
H. E. Robinson	1	26 00	4 15	$5 85	.....	10 00
J. F. Welden	5	72 65	2 65	.....	.....	2 65
Total	15	$252 25	$17 15	$5 85	$2 00	$25 00
C. A. JOHNSTON, DIVISION CHIEF, EASTERN DIVISION						
Henry Con	1	$20 00	.....	.....	.....	.....
W. R. Gibbs	2	21 00	$1 00	.....	.....	$1 00
James F. Mooney	3	50 00	12 85	.....	.....	12 85
Charles H. Nesley	2	71 55	3 20	$3 35	.....	6 55
Total	8	$162 55	$17 05	$3 35	.....	$20 40
R. B. NICHOLS, DIVISION CHIEF, ADIRONDACK DIVISION						
Ernest Fish	4	$64 00	$4 00	.....	.....	$4 00
BYRON A. CAMERON, DIVISION CHIEF, NORTHERN ADIRONDACK DIVISION						
William M. Stearns	11	$206 00	$14 90	.....	.....	$14 9

HUNTING AND TRAPPING LICENSES ISSUED DURING THE FISCAL YEAR OCTOBER 1, 1913, TO SEPTEMBER 30, 1914

COUNTY	Resident	Non-resident	Non-resident taxpayers	Total
Albany	3,825	20	.....	3,845
Allegany	3,156	20	20	3,196
Broome	2,212	20	.....	2,232
Bronx	15	.....	.....	15
Cattaraugus	4,564	160	30	4,754
Cayuga	3,150	40	.....	3,190
Chautauqua	4,824	20	10	4,854
Chemung	2,383	20	.....	2,403
Chenango	3,266	20	.....	3,286
Clinton	2,035	20	.....	2,055
Columbia	2,402	80	.....	2,482
Cortland	1,853	20	.....	1,873
Delaware	3,406	20	.....	3,426
Dutchess	3,280	160	40	3,480
Erie	6,827	.....	10	6,837
Essex	3,988	100	20	4,108
Franklin	3,719	240	40	3,999
Fulton	2,853	.....	30	2,883
Genesee	1,953	60	.....	2,013
Greene	2,637	.....	30	2,667
Hamilton	1,561	220	90	1,871
Herkimer	3,681	220	30	3,931
Jefferson	5,436	200	20	5,656
Kings	2,081	60	10	2,151
Lewis	2,774	80	20	2,874
Livingston	3,042	.....	10	3,052
Madison	2,420	.....	.....	2,420
Monroe	6,457	100	.....	6,557
Montgomery	2,356	.....	.....	2,356
Nassau	2,642	.....	.....	2,642
New York	4,181	1,060	280	5,521
Niagara	2,467	.....	.....	2,467
Oneida	5,763	200	30	5,993
Onondaga	6,705	20	.....	6,725
Ontario	4,111	20	.....	4,131
Orange	5,610	40	.....	5,650
Orleans	1,494	20	.....	1,514
Oswego	4,106	40	.....	4,146
Otsego	3,252	.....	.....	3,252
Putnam	664	.....	10	674
Queens	1,197	20	.....	1,217
Rensselaer	2,723	80	10	2,813
Richmond	546	.....	.....	546
Rockland	1,945	20	10	1,975
St. Lawrence	5,438	200	.....	5,638
Saratoga	4,385	60	.....	4,445
Schenectady	2,491	40	10	2,541
Schoharie	916	.....	.....	916
Schuyler	1,127	.....	.....	1,127
Seneca	1,339	.....	.....	1,339
Steuben	6,111	40	.....	6,151
Suffolk	6,215	400	50	6,665
Sullivan	3,352	20	10	3,382
Tioga	1,839	.....	.....	1,839
Tompkins	2,437	20	.....	2,457
Ulster	4,695	40	30	4,765
Warren	2,605	.....	20	2,625
Washington	2,310	20	30	2,360
Wayne	3,747	40	30	3,817
Westchester	3,630	60	30	3,720
Wyoming	2,124	.....	.....	2,124
Yates	1,379	.....	.....	1,379
Total	195,702	4,360	960	201,022

RECORD OF PHEASANTS AND PHEASANTS' EGGS SHIPPED FROM THE STATE GAME FARM AT SHERBURNE, N. Y., DURING THE YEAR 1914.

	Eggs	Birds
Albany	300	30
Allegany	360	108
Broome	585	289
Bronx	.....	.....
Cattaraugus	630	56
Cayuga	90	18
Chautauqua	420	42
Chemung	105	.....
Chenango	180	15
Clinton	450	16
Columbia	690	61
Cortland	300	13
Delaware	555	61
Dutchess	1,035	60
Erie	1,770	110
Essex	165	25
Franklin	555	26
Fulton	135	77
Genesee	90	5
Greene	150	4
Hamilton	180	6
Herkimer	480	81
Jefferson	1,805	300
Kings	30	.....
Lewis	1,505	96
Livingston	75	.....
Madison	180	25
Monroe	120	6
Montgomery	1,302	66
Nassau	270	32
New York	.....	.....
Niagara	750	45
Oneida	2,730	187
Onondaga	2,075	55
Ontario	15	.....
Orange	960	102
Orleans	45	6
Oswego	1,530	144
Otsego	570	38
Putnam	285	16
Queens	160	17
Rensselaer	375	32
Richmond	75	20
Rockland	345	29
St. Lawrence	765	111
Saratoga	955	59
Schenectady	180	27
Schoharie	114	6
Schuyler	.....	.....
Seneca	60	.....
Steuben	750	41
Suffolk	955	89
Sullivan	240	18
Tioga	585	223
Tompkins	415	36
Ulster	285	24
Warren	345	31
Washington	480	14
Wayne	15	.....
Westchester	685	45
Wyoming	285	15
Yates	.....	6
Total	31,541	3,064

Summary of Receipts

Hunting and trapping licenses	$201,022 00
Fines and penalties	66,346 63
Net licenses	14,986 14
Trout tagged	6,585 00
Game tagged	5,993 70
Breeders' licenses (deer, etc.)	425 00
Trout tagging machines	300 00
Importation licenses	320 00
Possession of venison	230 00
Licenses (furbearing animals)	135 00
Sale of skins (confiscated)	108 10
Scientific licenses	60 00
Special protectors' badges	26 00
Rent on trout tagging machines	1 00
	$296,538 82

ANNUAL REPORT

OF THE

SUPERINTENDENT OF INLAND FISHERIES

[231]

ANNUAL REPORT

OF THE

SUPERINTENDENT OF INLAND FISHERIES

Hon. James J. Fox, *Deputy Commissioner:*

Sir.— I respectfully submit herewith the report of the Bureau of Inland Fisheries for the fiscal year ending September 30, 1914, showing receipts from licensed nets of $14,986.14, which would have shown substantial increase from Seneca and Cayuga Lakes and other waters had not permission to use nets therein been withdrawn. These waters in former years gave a revenue amounting approximately to $1,400 with the use of gill, fyke and trap nets.

The calendar year of 1913 shows that the total number of pounds of fish taken was 5,574,062 with a valuation of $267,-106.46. The following table gives the wonderful increase from 1903–1913 in the catch of herring, whitefish and lake trout and the decrease in the catch of the shad:

	1903	1913
(Cisco) herring	1,574,617	3,247,413
Whitefish	49,421	376,158
Lake trout	3,229	33,094
Shad	392,110	87,115

We attribute the increase of the herring (cisco), whitefish and lake trout to the liberal stocking of our waters from nine hatcheries under the supervision of the Conservation Commission, and the decrease of the shad to the pollution of the Hudson and Delaware rivers and to the miles of nets along the Jersey shore and the nets used below Verplanck's Point in the Hudson river in the State of New York; also the taking of the fingerling shad for minnows, which greatly adds to said decrease. Nets used below Verplanck's Point are not required to be licensed and said nets are not prohibited from being used between sunset on Friday and sunrise Monday morning, which prevents a great number of the

shad from finding their way to the upper Hudson river, their natural spawning ground. Said shad taken below Verplanck's Point are not in condition for spawning, owing to the temperature of the water, and with these existing conditions, the Hudson river cannot expect an increase of shad to keep up the supply of former years.

Netting the waters of the State of New York under license for coarse fish (fish not protected by law) has received due consideration by the present Conservation Commission, and a very liberal policy has been enacted, yet the giving the people of the State a more abundant supply of food fish has not been accepted by the public for its true value. The removal of the coarse fish by licensed nets has a tendency to make the hook and line fishing better, as the net fishermen are not permitted to take any species of the game fish. This has not been accepted by some of the hook and line fishermen, yet the experimental work which the Commission has done in the granting of licenses for the use of nets in certain waters, has proved that hook and line fishing has been improved. There is no valid reason why the objectionable fish such as mullet, carp, catfish, dogfish, bullheads, suckers, eels, garfish and ling should not be taken from our waters by netting, which is the only method which may be successfully employed by which benefits may be obtained. To wit: Ridding the waters of the coarse fish, giving employment to a large number of men, furnishing a more abundant supply of food fish, and putting money into circulation.

Fishermen using licensed nets in the bays adjacent to Lake Ontario have taken 46,600 pounds of dogfish, garfish, billfish and ling the past season, thus relieving the waters of a destructive fish, which further demonstrates the benefits derived from the use of licensed nets in certain waters.

Fishermen netting the Erie Canal at the western wide waters in Rochester under license, assisted the Commission in taking 1,317 small-mouth black bass, 3 pickerel, 5 pike, 20 silver bass and 874 calico bass which were placed in Irondequoit Bay. This was in December, 1913, and rescuing said fish from the canal at that season of the year prevented the loss thereof.

The carp are finding their way into the waters of the State of

New York in great numbers. While they disturb the habits of our better class of fish, they are a source of considerable profit to the fishermen, and we should employ methods whereby the fishermen could take this class of fish before our waters are overrun with them. The licensed fishermen took approximately 400,000 pounds of carp in 1913.

More than one million carp were taken from the waters of Sandusky Bay in the State of Ohio in a period of four months during this past summer, and large numbers have been taken at other points in the State of Ohio.

The States of Illinois and Indiana are propagating carp, but as the waters in these latter States are sluggish streams, they are more adapted to this species of fish than the waters of the State of New York. We would not desire that the waters of this State be stocked with carp, as the carp seem to be able to take care of themselves.

Attached hereto find the statistical table of amounts collected, number of nets used and the waters where said nets are used for the fiscal year ending September 30, 1914; also the statistical table showing the waters from which fish were taken with licensed nets, the number of pounds taken and the value of the same for the calendar year of 1913.

M. C. WORTS,
Superintendent, Inland Fisheries.

RETURNS OF LICENSED FISHERMEN

Pounds of Fish Reported Caught During the Year 1913

	Chaumont bay, etc.	Hudson river, etc.	Lake Erie	Lake Ontario	Seneca river, Seneca and Cayuga lakes
Bass (striped)	.....	990	.....	.....	.....
Bass (rock)	9,430	.....	.....	.....	.....
Bullheads	88,700	17,909	1,750	1,500	13,510
Carp	13,330	123,540	39,920	500	147,840
Catfish	.....	.....	.....	.....	.....
Ciscos	15,150	.....	2,974,824	85,445	.....
Dogfish	5,740	.....	.....	.....	900
Eels	62,580	2,572	.....	18,010	1,420
Frostfish (tomcod)	.....	2,050	.....	.....	.....
Herring	.....	92,175	.....	.....	.....
Lake trout	3,904	.....	1,740	27,100	350
Mullet	.....	.....	.....	.....	.....
Perch	24,410	10,295	21,900	4,265	.....
Pickerel	16,070	.....	10,330	210	.....
Pike (blue)	7,404	.....	425,330	38,500	.....
Pike (wall-eyed)	7,370	.....	12,927	4,130	.....
Shad	.....	87,115	.....	.....	.....
Sturgeon	730	20,590	18,800	3,530	.....
Suckers	127,330	54,023	31,210	9,030	45,755
Sunfish	27,610	4,300	.....	600	10,110
Whitefish	4,225	.....	266,458	15,500	1,110
Billfish	.....	.....	.....	.....	.....
Garpike	.....	.....	.....	.....	.....
Total pounds	413,974	415,469	3,805,189	192,120	220,995
Total value	$27,761 30	$31,903 94	$139,289 00	$14,234 00	$9,087 52

RETURNS OF LICENSED FISHERMEN

Pounds of Fish Reported Caught During the Year 1913 — *(Continued)*

	Sodus, Fair Haven bays, etc.	Niagara river	Otsego lake	Sturgeon set-lines	Sage Creek, North and Floodwood ponds
Bass (striped)	.....	.....	.....	.....	.....
Bass (rock)	.....	.....	.....	.....	.....
Bullheads	46,065	3,480	.....	.....	30,210
Carp	6,950	12,713	.....	400	2,580
Catfish	.....	.....	.....	.....	.....
Ciscos	32,640	2,545	.....	.....	2,600
Dogfish	29,348	.....	.....	.....	10,827
Eels	2,295	915	.....	4,405	3,118
Frostfish (tomcod)	.....	.....	.....	.....	.....
Herring	.....	.....	.....	.....	.....
Lake trout	.....	.....	.....	.....	.....
Mullet	.....	.....	.....	.....	.....
Perch	.....	1,365	.....	.....	.....
Pickerel	.....	.....	.....	.....	.....
Pike (blue)	.....	6,125	.....	.....	.....
Pike (wall-eyed)	.....	97	.....	.....	.....
Shad	.....	.....	.....	.....	.....
Sturgeon	.....	1,890	.....	35,800	.....
Suckers	2,025	8,620	11,669	20	2,820
Sunfish	22,460	.....	.....	.....	7,850
Whitefish	.....	.....	89,975	.....	.....
Billfish	.....	.....	.....	.....	.....
Garpike	.....	.....	.....	.....	3,500
Total pounds	141,783	37,750	101,644	40,625	63,505
Total value	$9,215 56	$3,795 65	$10,612 36	$7,536 16	$3,750 00

RETURNS OF LICENSED FISHERMEN

Pounds of Fish Reported Caught During the Year 1913 — *(Continued)*

	Irondequoit bay	Erie canal, Monroe co.	Oswego, Oneida rivers, etc.	Other waters
Bass (striped)	.....	.....	.....	.....
Bass (rock)	.....	.....	.....	.....
Bullheads	.....	.....	.....	555
Carp	26,465	7,305	.....	5,025
Catfish	.....	.....	.....	.....
Ciscos	44,634	.....	.....	.....
Dogfish	518	.....	.....	220
Eels	42	34	41,635	41
Frostfish (tomcod)	.....	.....	.....	.....
Herring	.....	.....	.....	.....
Lake trout	.....	.....	.....	.....
Mullett	.....	.....	.....	.....
Perch	.....	.....	.....	.....
Pickerel	.....	.....	.....	.....
Pike (blue)	.....	.....	.....	.....
Pike (wall-eyed)	.....	.....	.....	.....
Shad	.....	.....	.....	.....
Sturgeon	.....	.....	.....	100
Suckers	888	388	.....	10,971
Sunfish	.....	.....	.....	.....
Whitefish	.....	.....	.....	.....
Billfish	1,635	480	.....	.....
Garpike	.....	.....	.....	72
Total pounds	74,182	8,207	41,635	16,984
Total value	$4,999 12	$387 37	$3,445 00	$1,089 48

Total pounds of fish taken	5,574,062
Total value of fish taken	$267,106 46

LICENSED NETS USED AND FEES PAID OCTOBER 1, 1913, TO SEPTEMBER 30, 1914

	Fyke	Scap	Gill	Seine	Stake	Row boat, sail boat, power boat	Trap	
Hudson river, Delaware river, Rondout creek	497	165	97	54	16	.....	....	$3,580 33
Lake Ontario	....	....	....	....	....	66	18	1,290 00
Lake Erie	....	....	....	....	....	66	45	2,560 50
Chaumont bay	238	2	31	....	....	.....	196	1,697 00
Otsego and Cayuga lakes	....	....	....	30	....	.....	....	158 00
Nets for taking deleterious fish	306	6	....	61	....	.....	347	4,187 73

Minnow net licenses, 214	$686 35
Sturgeon set line licenses, 324	324 23
Eel weirs, 17	340 00
Niagara river scaps, 2	2 00
Machine traps, 8	160 00
	$14,986 14

SHIPMENTS OF DEER

BY

COMMON CARRIER—HUNTING ACCIDENTS, ETC.

SHIPMENTS OF DEER BY COMMON CARRIER

To the Superintendent of the American Express Company, Mr. F. A. Hoyt, and the Superintendent of the National Express Company, Mr. C. S. Colvin, we are indebted for the facts and figures relative to shipment of deer hereto appended.

For the years 1911 and subsequent thereto, covering the period since the creation of the Conservation Commission, the shipments reported by the express companies have been as follows:

	Carcasses	Saddles	Heads
1911	1,743	60	114
1912	968	41	120
1913	1,269	81	128
1914	1,266	109	143

DEER SHIPMENTS SEASON 1914

M. & M. Route

STATION	Carcass	Saddle	Head	Total	Weight
Beaver River	30	2	3	35	4,331
Big Moose	27	1	4	32	3,571
Brandreth	8	.....	3	11	1,096
Carter	36	2	.....	38	4,792
Childwold	36	5	.....	41	5,224
Floodwood	13	.....	.....	13	1,740
Forestport	17	1	.....	18	2,325
Fulton Chain	31	3	9	43	4,260
Gabriels	20	.....	.....	20	2,445
Hinckley	18	2	.....	20	2,437
Horseshoe	7	.....	1	8	994
Lake Clear Jct	7	.....	.....	7	1,004
Lake Kushaqua	4	.....	.....	4	537
Long Lake West	77	9	1	87	10,250
Loon Lake	12	3	1	16	1,908
Malone	5	.....	9	14	1,041
McKeever	11	1	2	14	1,674
Minnehaha	4	.....	.....	4	580
Moulin	2	.....	.....	2	299
Mountain View	5	.....	2	7	803
Nehasane	1	.....	.....	1	135
Nelson	1	.....	.....	1	150
Otter Lake	2	.....	.....	2	290
Owls Head	.....	.....	2	2	34
Piercefield	51	.....	2	53	1,897
Pleasant Lake	11	.....	.....	11	1,471
Poland	3	2	.....	5	515
Rainbow	2	.....	.....	2	250
Raquette Lake	30	1	.....	31	3,936
Saranac Inn	7	.....	.....	7	1,038
Saranac Lake	14	1	.....	15	1,847
Tupper Lake Jct	75	15	.....	90	10,103
White Lake Corners	28	2	1	31	3,802
Woods Lake	8	.....	.....	8	1,186
	603	50	40	693	77,965

N. Y. & O. Route

STATION	Carcass	Saddle	Head	Total	Weight
Bay Pond	2	.....	.....	2	295
Brandon	3	.....	.....	3	340
Childwold	7	.....	.....	7	775
Derrick	5	.....	.....	5	760
Dickinson Center	2	2	.....	4	313
Downeys	5	.....	.....	5	730
Kildare	23	.....	.....	23	2,995
Madawaska	6	.....	.....	6	830
Meno	27	1	.....	28	3,945
Moira	8	.....	.....	8	1,234
St. Regis Falls	5	.....	11	16	777
Santa Clara	24	.....	.....	24	4,269
Spring Cove	11	1	.....	12	1,546
	128	4	11	143	18,799

R. W. & O. Route (C. & A. Branch)

Aldrich	1	.....	.....	1	140
Benson Mines	68	7	5	80	10,483
Harrisville	14	.....	.....	14	1,966
Kalurah	6	.....	.....	6	905
Natural Bridge	1	.....	.....	1	124
Newton Falls	51	6	3	60	8,030
Oswegatchie	18	.....	.....	18	2,650
	159	13	8	180	24,298

R., W. & O. Route.

Antwerp	2	.....	.....	2	266
Canton	2	.....	.....	2	267
Eben	1	1	1	3	210
Edwards	2	.....	.....	2	258
Hermon	1	.....	8	9	469
Massena	.....	.....	1	1	27
Norwood	1	.....	.....	1	157
Potsdam	28	.....	.....	28	4,131
	37	1	10	48	5,785

F., J. & G. Route

Fonda	2	.....	.....	2	251
Gloversville	10	1	.....	11	1,519
Johnstown	1	.....	.....	1	117
Northville	47	11	6	64	6,876
	60	12	6	78	8,763

Little Falls & Dolgeville Route

Dolgeville	3	.....	.....	3	445

R., W. & O. (U. & B. Route)

Alder Creek	7	.....	.....	7	1,002
Boonville	4	.....	.....	4	540
Brier Hill	1	.....	.....	1	125
Carthage	.....	1	.....	1	4
Croghan	23	4	.....	27	3,455
Glenfield	21	1	1	23	2,985
Lowville	8	.....	.....	8	1,203
Lyons Falls	10	.....	.....	10	1,484
Port Leyden	4	.....	1	5	645
Prospect	12	.....	.....	12	1,524
Remsen	3	.....	.....	3	408
	93	6	2	101	13,375

Recapitulation, American Express Co.

STATION	Carcass	Saddle	Head	Total	Weight
M. & M. Rte.	603	50	40	693	77,965
N. Y. & O. Rte.	128	4	11	143	18,799
R., W. & O. (C. & A. Rte.)	159	13	8	180	24,298
R., W. & O.	37	1	10	48	5,785
F., J. & G. Rte.	60	12	6	78	8,763
L., F. & D.	3	.....	.....	3	445
R., W. & O. (U. & B. R.)	93	6	2	101	13,375
	1,083	86	77	1,246	149,430

D. & H. R. R., Intra-State

From	Carcases	Saddles	Head
Ausable Forks, N. Y.	...	...	5
Bloomingdale, N. Y.	1	1	1
*Big Indian, N. Y.	3	1	3
Corinth, N. Y.	1	...	...
Dannemora, N. Y.	1	...	2
Glens Falls, N. Y.	1	...	...
Hadley, N. Y.	2	...	6
Hudson Falls, N. Y.	...	...	3
Keeseville, N. Y.	...	...	1
Lake Placid, N. Y.	1	...	3
Loon Lake, N. Y.	4	...	1
Lyon Mountain, N. Y.	1	...	2
Lake George, N. Y.	1	...	...
*Mt. Pleasant, N. Y.	...	...	1
North Creek, N. Y.	104	6	4
Port Henry, N. Y.	6	8	14
Port Kent, N. Y.	1	...	...
Plattsburgh, N. Y.	...	...	4
*Phoenecia, N. Y.	2	...	2
Russia, N. Y.	1	...	...
Ray Brook, N. Y.	2	...	...
Riverside, N. Y.	3	6	3
Saratoga Springs, N. Y.	3	...	1
Standish, N. Y.	5	...	1
Stony Creek, N. Y.	31	1	2

*Big Indian, Mt. Pleasant and Phoenecia shipments originated on Ulster & Delaware R. R.

D. & H. R. R., Intra-State — Continued

From	Carcases	Ssddles	Heads
Ticonderoga, N. Y.	1	...	3
The Glen, N. Y.	1	...	...
Thurman, N. Y.	1	...	...
Westport, N. Y.	5	...	2
	182	23	64

D. & H. R. R., Inter-State

Cambridge, N. Y.	.....	.....	2
Saratoga Springs, N. Y.	1	.....	.....

TOTAL SHIPMENTS OF DEER BY EXPRESS, 1914

American Express Co.	1,083	86	77
National Express Co.	183	23	66
	1,266	109	143

LIST OF DEER SHIPMENTS — WEIGHT 200 POUNDS AND OVER

American Express Company

Weight	Shipping station	Consignee	Destination
210	Beaver River	G. B. Ludington	Buffalo.
200	Childwold	N. LaValley	Tupper Lake Jct.
200	Childwold	H. P. Norris	Utica.
200	Childwold	H. Evans	North Lawrence.
200	Loon Lake	J. F. Gardner	Binghamton.
255	Malone	M. Lifysan	Yonkers.
214	McKeever	F. G. Peabody	Albany.
200	Piercefield	A. J. Waite	Binghamton.
200	Piercefield	E. C. Newman	Ballina.
205	Saranac Inn	D. U. Dunn	New York.
210	Saranac Lake	E. W. Cook	Rockville Center.
225	Tupper Lake Jct	John Muller	Buffalo.
223	Tupper Lake Jct	H. S. Ross	Boston, Mass.
200	White Lake Corners	J. Wagner	Utica.
200	Downeys	Wm. Parks	St. Regis Falls.
250	Kildare	C. D. Cornish	New York.
200	Kildare	J. Donovan	Rochester.
200	Meno	B. Snell	Dickinson Center.
200	Meno	F. Cheney	Dickinson Center.
200	Meno	W. H. Keene	Watertown.
200	Meno	F. F. Fullerton	St. Regis Falls.
200	Meno	F. Lemink	St. Regis Falls.

LIST OF DEER SHIPMENTS — *Continued.*

Weight	Shipping Station	Consignee	Destination
216	Moira	J. Patch	Rouses Point.
203	Moira	Neil G. Miller	Woburn, Mass.
210	Santa Clara	G. Kyson	Machias.
202	Santa Clara	L. Lowell	Machias.
216	Santa Clara	A. Kreth	Brooklyn.
218	Santa Clara	G. Kratzen	Buffalo.
218	Santa Clara	C. Ehil	Hamburg, N. Y.
221	Santa Clara	G. A. Stearns	Hamburg, N. Y.
228	Spring Cove	W. Schmith	White Plains.
212	Benson Mines	A. S. Herrick	Syracuse.
200	Benson Mines	J. M. Lyons	Albion.
220	Benson Mines	B. Stewart	Hamilton.
206	Benson Mines	T. O. Glenn	Bradford, Pa.
206	Benson Mines	U. R. Owens	Watertown.
204	Newton Falls	R. H. Hogan	Antwerp.
204	Newton Falls	S. Todd	Potsdam.
210	Newton Falls	G. A. Gottett	Syracuse.
212	Newton Falls	D. E. Lillis	Syracuse.
210	Newton Falls	Wm. Day	Watertown.
218	Newton Falls	G. M. Waldo	Watertown.
204	Oswegatchie	J. H. Himis	Harrisville.
235	Oswegatchie	A. Ellis	Adams.
228	Oswegatchie	F. H. Parker	Pennellsville.
200	Oswegatchie	C. Edminster	Cato.
206	Hermon	W. A. Carpenter	Chittenango.
200	Gloversville	A. J. Sloan	Fonda.
205	Gloversville	D. E. Hunt	Palatine Bridge.
200	Dolgeville	G. Carlisle	Syracuse.
200	Clenfield	J. M. Joslyn	Lyons.
205	Lyons Falls	H. H. Tompkins	Utica.
200	Port Leyden	S. Downer	Buffalo.
200	Port Leyden	L. E. Stone	Bouckville.

National Express Company

FROM	Date	Weight	Consignee	Destination
Dannemora, N. Y.	Nov. 14	215	W. P. Powers	Troy, N. Y.
North Creek, N. Y.	Nov. 6	208	Earl Duca	Schenectady, N. Y.
North Creek, N. Y.	Nov. 6	213	George Duca	Schenectady, N. Y.
North Creek, N. Y.	Oct. 19	203	Geo. G. Starne	New York, N. Y.
North Creek, N. Y.	Oct. 16	210	Arthur H. Christigan	Brooklyn, N. Y.
North Creek, N. Y.	Oct. 6	200	H. G. Corwin	New York, N. Y.
North Creek, N. Y.	Nov. 5	235	Guy Ellsworth	Binghamton, N. Y.
Ray Brook, N. Y.	Oct. 6	200	A. Adler	New York, N. Y.
Standish, N. Y.	Nov. 14	240	S. S. Cooledge	Lyon Mountain, N. Y.
Stony Creek, N. Y.	Nov. 14	219	Edw. J. Neville	Ballston Springs, N. Y.

HUNTING ACCIDENTS

During the 1914 deer season there were only five deer hunting accidents, with three fatalities, according to the reports made to the Conservation Commission by the game protectors. There is

no evidence to show that a single one of the five victims was shot at in mistake for a deer.

Out of the twenty-two hunting accidents reported to the Conservation Commission up to the close of the deer season, seventeen occurred in the pursuit of small game, attended by five deaths. Although most of the casualties indicated gross carelessness on the part of the hunters, the sportsmen of the State are undoubtedly exercising more care than ever before in the handling of weapons. When it is remembered that there are over 200,000 licensed hunters in the State, besides thousands who can legally hunt on their own farms without licenses, the list of only a score of accidents is reducing casualties in pursuit of a hazardous sport to the minimum.

The death of Donald Curran, a lumberjack of Old Forge, whose body was found October 23 in the woods about one mile from the outlet of Kiln Lake by Herbert Hillard, is included in the list of five deer hunting fatalities. The man had been dead about ten days. He had a gun and pack basket. The first reports on the case were to the effect that Curran had probably been struck by a stray bullet, but the coroner is investigating to ascertain if it might have been murder.

Ellis Shimmel, aged 20, of Mohawk, while hunting deer on November 8, in the town of Colton, slipped and fell as he was crossing a rustic bridge, resulting in the accidental discharge of his own rifle. The bullet entered his body, causing death.

Edward McIntosh, aged 30, of Carthage, hunting deer with his father, Henry McIntosh, and his brother, Easter McIntosh, near Harrisville, October 9, was hit in the breast by a buck shot and seriously wounded. The father claims he shot at a running buck with a shot gun and did not know his son was in range.

Mark Carey, a guide of Sodom, was shot in the thigh while hunting in a party of seven in the vicinity of the Chatiemac Club. A deer was surrounded by the hunters. Carey and another hunter fired at the animal about the same time, his friend's bullet's striking him instead of the game. Carey is recovering.

John Lawless, of Gabriels, hunting deer on Osgood river, near Paul Smith's, sat in boat with muzzle of gun pointing towards him. In reaching for the gun it slipped and hit the rib of boat and contents of barrel was discharged into his abdomen, killing him.

The accidents which occurred to small game hunters were as follows: Judson Warner, of the town of Chenango, Broome county, while hunting woodchucks in company with J. Bruce Allen, in the town of Barker, August 27th, was mistaken for a woodchuck by his friend, fired at and fatally wounded. Warner died in the Binghamton hospital August 29th.

Mark Hill, of Berrington, duck hunting on South Lake, near Lyndhurst, was accidentally shot by his companion, named Van Coot, the wound resulting fatally. The men had stepped from their boat and were unloading their guns on shore when Van Coot's weapon was accidentally discharged.

Guy Meyers, of Model City, Niagara county, was accidentally shot and killed by his companion on a bird hunting trip in October. A charge of bird shot entered his hip at close range.

Benjamin J. Hill, the 15-year-old son of Benjamin Hill, of Cohoes, was accidentally shot and killed by another lad named McGraw, with whom he was hunting along the Mohawk opposite Cohoes.

Fern Dunsheen, the 8-year-old daughter of Clarence Dunsheen, of Sidney Center, Delaware county, while out berrying, was mistaken for a woodchuck by a hunter, shot and fatally wounded. The child expired in the hospital at Oneonta.

John McMullen, of Painted Post, hunting in the woods in the vicinity of that village October 1, was accidentally shot in the leg, back and wrist by his companion, Leo Craig, with a shot gun.

Halsey Le Grange, of Prattsburg, was seriously injured hunting with two companions, by the accidental discharge of his own shot gun, which occurred while he was climbing over a log.

Bertram Casler, of Little Falls, was accidentally shot by his brother, John Casler, when they were hunting partridge near St. Johnsville. The shot entered the knee and body. Not fatal.

John Sloane, of Red Mills, hunting ducks around Big Island, St. Lawrence river, was shot in the left foot by the accidental discharge of his own gun. The gun slipped on the boat seat.

Walter Weaver and Merritt Babcock, of Petersburg, were accidentally shot near that place October 1. Weaver stumbled, dropping his shot gun, which was discharged, wounding Weaver in the shoulder and his companion in the knee.

Mrs. Cady, of Ballston, was accidentally shot near Harrisburg

by a man who was attempting to unload a gun. The shot struck the woman in both legs and also shot off the end of her fingers on the right hand.

James Quigley, of Norfolk, hunting for partridge in the vicinity of Madrid, was accidentally shot in the face by his companion, Mark Goodnow, when the latter fired at a partridge.

A. L. Burger, of Hornell, while hunting near Hartsville, climbed aver a fence, accidently discharging his shot gun, and lost a finger.

Wilford Kleisler, son of Julian Kleisler, of Southampton, was accidentally shot by George Whitby. Young Kleisler was in a boat on Taylor's creek with several other lads. They had a flobert rifle, which was accidentally discharged, the bullet entering the spine and thence through the stomach. The lad died after an operation in the Southampton hospital.

John Thompson, of New York, was accidentally shot in both feet by Walter Young, of Chestertown, while on a hunting trip on Panther mountain. They were hunting partridge and had rested to clean their guns. Young's repeating shot gun was accidentally discharged.

Robert White, of Oneonta, hunting rabbits with a party, was accidentally shot by his brother, Marshall White, of Arena. He received a charge of number six shot at close range, but will recover.

RETURN OF THE BEAVER TO THE ADIRONDACKS

RETURN OF THE BEAVER TO THE ADIRONDACKS

The beaver has been restored to his favorite haunts, the Adirondacks, by means of restocking and effective protection, according to the reports of systematic observations of protectors and others received by the Conservation Commission. These investigations show that there are to-day between 1,500 and 2,000 beaver in the wilds, which the Iroquois Indians called "Koh-sa-ra-ga," "The Beaver-Hunting-Country," and whose ownership was challenged by the Canadian tribe, styled in derision by the Mohawks, the "Adirondacks," the "Tree Eaters."

The Adirondacks to-day are again entitled to their old Iroquois name, for they are rapidly becoming the country of the Beaver, although this favorite fur bearing animal is no longer persecuted by the trapper and hunter.

The Legislature of 1903 appropriated $500 to begin the restocking of the Adirondacks with beaver and in 1905 three pairs were liberated. One pair were given their liberty on a small stream entering the south branch of Moose river, where another beaver which had escaped from the Woodruff preserve had built a dam. The other four were liberated on the northeast inlet of Big Moose Lake, but moved over into Beaver river, twenty miles to the northeast, to begin housekeeping. During 1905 Edward H. Litchfield liberated about a dozen beavers in his preserve near Big Tupper Lake, and several of these escaped into adjoining preserves.

In 1905 there was reported to the Fish and Game Commission the existence of a "small native colony of beavers, the last of the remnants of the original stock, inhabiting the waters northwest of upper Saranac Lake." That year the Commission placed a "conservative estimate of the beaver in the Adirondacks" at "about forty."

In 1906 the Legislature appropriated $1,000 for continuing the restocking of the Adirondacks with beaver and the following year seventeen were obtained from Yellowstone Park and distributed. The Commission gave the beaver census that year at 100.

In 1904, about the time the State of New York began its work of restoring the beaver to his native habitat, an authority on "American Animals" recorded in his book the sad fact that "the beaver is now nearly extinct in the United States." Much general interest has been displayed in the work of restoration in this State and the Conservation Commission is happy to say that popular co-operation has made the task of protecting *Castor canadensis* a comparatively easy one.

LOCATIONS OF BEAVER

The reports received by the Conservation Commission show that beaver are multiplying rapidly and are taking possession of their ancient heritage in many different sections of the Adirondacks.

Colton District. Protector Smith of Colton reports three colonies in his territory of the Raquette river country.

Cranberry Lake District. Protector Hand of Cranberry Lake records 1 colony on Grasse river below the reservoir; 1 colony on Cranberry Lake Inlet; 1 colony on Bog river; and "signs in the Town of Webb."

Croghan District. Protector Andre of Croghan reports 2 colonies at Sunday Lake; 1 at Stillwater, Beaver river; 1 at Francis Lake; 1 at upper end of Watertown Light and Power dam; 2 on west branch of Oswegatchie river. All "good sized colonies with large houses." Also a few beaver scattered in various places, without permanent habitat as yet.

Forestport District. Protector Bellinger of Forestport reports 3 colonies on the Black river; 1 at Kayuta pond; 1 three miles above Enos where they have built a dam; 1 on the Stillwater below North Lake; 1 colony on north branch of North Lake; 1 colony on second Stillwater above Honondaga Lake on West Canada Creek; several colonies on Indian river. Also reported by protector Ball, 1 colony on Wintime pond; 1 on Little Black Creek; 2 on Twin Lakes streams; 3 on Big Woodhull streams.

Fulton Chain District. Protector Ball of Old Forge enumerates and locates no less than 79 colonies, with 76 dams, inhabited by 223 beaver. The beaver locations in Ball's district are: Old Forge Pond, Big Spring Creek, First Lake and marshes. Second Lake, Third Lake, Fourth Lake, Fifth Lake, Sixth Lake, Seventh Lake, Eighth Lake, Cedar Creek, Black Mt. Creek, Eagle Creek, Limekiln Creek, Red river, Indian river (mostly bank beaver), Nick's Lake, Dry Lake (not dry now, flooded by beaver), Moose river (bank beaver), Hellgate Creek, Indian Spring Creek, Inlet of Big Otter, North Branch above Fulton Chain, Rondax Lake, Snake Pond, Chub Pond, Constable Pond, Queer Lake, south and west branches Beaver river.

J. Gilbert Hoffman, of Fulton Chain, finds that the beaver are increasing rapidly in various sections he has visited. He found a colony at Red Horse Chain and others reported by protectors. In that territory the intelligent animals have apparently lost most of their natural fear of man. A beaver dam on Eagle Creek which caused the flooding of the highway, was torn down under the direction of Protector Ball. The beaver reconstructed the dam over night. In another interesting case, the beaver insisted on invading Dr. Nicholl's property on First Lake. Protector Ball placed a lighted lantern in a lodge of the intruders, but they refused to take the hint to move on, and industriously extended their lodge over and around the warning beacon. Then in order to circumvent the trespassing beaver, the men put up a wire fence so the beaver could not get into Nicholl's yard where they were cutting poplars for food. Thereupon the wily animals vindicated the assertion of a scientist who said that "beaver aparently depend more upon reason and less upon instinct than do the majority of the forest folk." They piled wood against the fence and easily climed over into the forbidden territory.

Mr. Hoffman says the Brown's Tract Lumber Company is glad to see the beaver restored to the Adirondacks. In his opinion they do no great damage except in rare cases where they become so tame as to invade summer camp groves.

Glenfield District. Protector VerSnyder of Glenfield reports the beaver numerous in his section: 1 colony at Mud Hole Pond; 1 at Little Pine Lake; 1 on Pine Creek; 1 on Crawford's Fish

Pond. Protector Quirk of Pulaski reports that he has not learned of any beaver in Oswego County. He has information of 1 colony on Crooked Creek, Lewis County, one mile from south end of Stoney Lake, and 1 colony east of the north end of Stoney Lake in Independence river.

Gloversville District. Protector Masten reports that "the beaver made several visits to Fulton County," but founded no permanent colonies. It is possible that the few beaver in that section are "bank dwellers," as the animals, when disturbed by or not yet accustomed to civilization, do not build lodges.

Keene District. Protector Seckington, Elizabethtown, reports in September a beaver colony at Hull's Falls, town of Keene. On December 10 he reported discovering a new colony which has constructed a dam about 75 feet long, and flooding about 25 acres, on Gates Brook. The animals have built a lodge 15 feet in diameter accommodating 10 to 12 beaver.

Lake Pleasant District. Protector Howland of Speculator, reports very numerous in his territory: On Miami river, two dams with at least 20 beaver at each, and a third dam building in September on that river; 1 colony on Mill Brook; 2 large dams on Whitney Creek. To support the first dam, the beaver have built a dam half a mile below, backing up the water to it that distance. The first dam floods the stream one mile. One small colony on Mosey Fly stream. One large dam on outlet of Spencer Lake, with back water of two miles, inhabited by at least 200 beaver. Large colony and dam on north branch of Sacandaga river, with 30 to 40 inhabitants. Beaver in September were building a new dam on Samson Lake outlet and colony is established there.

Long Lake District. Protector Butler of Long Lake reports at least 30 beaver in his section. He makes this observation of special interest to the trout anglers: "The people living in this section think the beaver are doing fine and are glad to see them back. They tell me the beaver are a protection to our small streams containing trout, because the beaver builds dams and flood the marshes back of the dams. This makes it hard for the fishermen to fish all the pools and gives the trout a chance to grow."

Newcomb District. Protector Bissell of Newcomb reports 2 large colonies in the town of North Hudson; 1 colony in the town at Minerva and 4 colonies in the town of Newcomb.

Plattsburgh District. Protectors North and Kirby report from Plattsburgh that they found a "good sized colony" of beaver on Smith's Kiln Brook, town of Saranac, Clinton county. The animals have built a dam 35 feet long, flooding an acre.

Protector Riley of Plattsburg learned that the colony which had established itself near the mouth of the Ausable river last spring had moved up near Ausable Forks.

Protector Kirby of Brainardsville makes report of a colony on Redford Brook.

Raquette Lake District. Protector Lynn of Raquette Lake makes a detailed report of numerous colonies in his territory, showing over 250 beaver inhabitants. His record of locations is as follows: In Township 40, colonies on Bowlder Brook; 1 on Beaver Brook; 1 on Otter Brook; 2 on Brown's Tract Inlet; 1 on Brandeth Lake stream; 1 on Marion river. In Township 41, 1 colony on Cascade Lake stream; 1 on Shallow Lake stream; 1 on Cranberry Pond; 1 on Eagle Creek; 2 on Two Sisters Pond. In Township 39, 2 colonies on north branch of Shingle Shanty stream; 1 on East Pond. In Township 36, 1 colony on Big Salmon Lake; 1 on Carey Pond; 1 on Rack Pond stream; 1 on Flat Fish Pond; one on Bottle Pond stream. In Township 35, 1 colony on Loose Pond stream; 2 on North Bay Brook, Forked Lake; 1 on Upper Sargeant Pond. In Township 34, 2 colonies on Utawanta Lake; 1 on Loon Brook. In Township 6, 1 colony on Marion river; 2 on South Inlet; 1 on Bear Brook. In Township 5, 1 colony on Brown's Tract Pond. In Township 3, 2 colonies on Hess Pond; 1 colony on Fifth Lake; 1 colony on Seventh Lake; 2 colonies on Red river. In Township 4, 2 colonies on Falls Pond; 2 colonies on Mitchell Pond; 1 on Summer Creek; 2 on Indian river.

St. Regis District. William Bump, a caretaker of the Brooklyn Cooperage Company's tract on the St. Regis river, reports the beaver becoming quite numerous around the Ten Mile. Henry House of the Five Mile Camp, St. Regis river, found several families of beaver on Alder Brook.

ANNUAL REPORT

OF THE

BUREAU OF MARINE FISHERIES

ANNUAL REPORT

OF THE

SUPERVISOR OF MARINE FISHERIES

Hon. James J. Fox, *Deputy Commissioner:*

Sir.— I herewith transmit report of the Bureau of Marine Fisheries for the fiscal year ending September 30, 1914, as required by section 303, part 10, of the Conservation Law.

During the past year a great deal has been accomplished by this bureau to promote the shellfish industry of the State and to insure the consumer a wholesome pure food product. It is the aim of this bureau to supervise all shellfish, from the water through all hands until it reaches the consumer, which up to this time has been impossible, owing to the fact that we have no appropriation from the Legislature to pay for the services of a bacteriologist, nor have we sufficient appropriation to provide a boat and outside force enough to carry on this work as it should be.

It is very important that this great industry be protected as far as possible. We find that most oyster growers are desirous of complying with the sanitary rules laid down by the Commission and are anxious to have certificates issued showing that their product is taken under sanitary conditions. I would recommend that this bureau issue sanitary certificates at as early a date as possible.

This bureau should be provided with a boat, large enough to patrol the East river and Long Island Sound, to protect the State lands and make surveys on lands leased to oyster growers. Under existing conditions, this department is dependent upon people who make application for oyster leases to take our protectors to the ground for inspection and then to take our surveyor to the ground for survey.

Considerable caution has been exercised by this department to prevent the leasing of natural growth oyster grounds, and thus far this bureau has been very successful in that respect, having

a thorough examination made by our protectors to see that the grounds do not contain natural growth.

We have compiled with considerable care statistics that will show in a general way the size of the shellfish industry. These figures are not absolutely certain, but are the most available data that we could compile at this time from facts and figures at hand. This statement is attached hereto.

In compiling the same, we are indebted to the efforts of the late Supervisor, the Hon. Edwin Bailey, whom this department had the misfortune of losing by death during the month of July of this year. Mr. Bailey at his death, although unexpected, left the affairs of this bureau in the same condition they would have been in had he had time to prepare the affairs before his death; which was the spirit he always displayed in both his private and public affairs, being a credit to himself and to the people whom he served.

During the month of April of this year, a rule was inaugurated by the Commission permitting the granting of leases for large acreage of heretofore uncultivated lands in Long Island Sound, at the rate of $0.50 per acre, that the oyster growers might experiment with these lands, but this has not been taken advantage of to any great extent up to this time. I have reason to believe, however, that it is a good rule if properly supervised and one that in the near future will be taken advantage of to a greater extent by the oyster growers.

You will observe by comparison that the financial report of the bureau for the last fiscal year shows a material increase in receipts over the report of the previous year, the total receipts of this bureau being $33,400.13, being an increase of more than six thousand dollars. The report is sufficiently prepared in detail to require no further comment.

The report of the Surveyor of the Bureau of Marine Fisheries is hereto attached. Such recommendations as he makes are concurred in by me.

Yours very respectfully,

DAYTON HEDGES,

December 29, 1914. *Supervisor.*

STATISTICS RELATIVE TO THE OYSTER INDUSTRY

Total number of acres held under lease and franchise	31,645.65
Acres cultivated under lease	15,733.6
Acres cultivated under franchise	15,912.05
Total number of acres cultivated	31,645.65
Number of steam vessels employed	68
Tonnage of steam vessels employed	5,262
Number of power vessels employed other than steam	267
Tonnage of power vessels employed	2,131
Value of steam vessels and appliances	$418,250 00
Value of power vessels and appliances	390,200 00
Total value of vessels and appliances	$808,450 00
Value of shore property used in business	$375,200 00
Number of hands employed	1,776
Total amount of wages paid in past year	723,233 00
Bushels of seed oysters produced	1,635,640
Bushels of seed oysters sold	851,410
Bushels of seed oysters planted	5,046,500
Bushels of market oysters sold	5,556,350
Bushels of clams sold	190,550

Principal market — United States.

SURVEYOR'S REPORT

Hon. Dayton Hedges, *Supervisor Bureau Marine Fisheries, 295 Broadway, New York City:*

Dear Sir.— The following is the report of the surveys made in connection with the location of lands under water used for shellfish cultivation during the fiscal year ending September 30, 1914. Appended hereto is a list of the lots surveyed showing a total area of 3769.6 acres.

During the season a new set of triangulation stations near Smithtown Bay were located. The inspection of signals on Long Island was continued, and the majority were found to be in good condition.

As the old polyconic projection lease maps of the shell-fish grounds in Raritan Bay and Lower New York Bay are rapidly deteriorating, new maps were plotted and the transfer of the lots thereto begun.

During the past year much work has been done by myself and assistant in collecting data and making reports relative to the sanitary condition of the shellfish grounds. Detailed lists have been prepared showing the location and acreage of all the shellfish grounds in New York State waters, including those leased by various counties and towns.

I beg to call attention to the recommendations made in my report of last year of the necessity of making a triangulation survey of the shellfish grounds in the Hudson river. The use of a boat is necessary for this work, and is also essential for the completion of the inspection of signals on Long Island and the re-establishment of those which have doubtless been destroyed.

I also beg to recommend that the conservation law be amended so as to require the marking with flags of all corner buoys or stakes.

Respectfully submitted,
EDWARD H. SARGENT,
Surveyor Bureau Marine Fisheries.

December 14, 1914.

SHELLFISH GROUNDS SURVEYED BETWEEN SEPTEMBER 30, 1913, AND SEPTEMBER 30, 1914

LESSEE	Lot No.	Acreage	Location	Remarks
Samuel Y. Bayles	1,026	71.7	Raritan bay.	
N. Y. Oyster Co	1,025	124.6	Raritan bay.	
N. Y. Oyster Co	1,027	81.2	Raritan bay.	
N. Y. Oyster Co	1,028	466.0	Raritan bay.	
N. Y. Oyster Co	1,029	30.4	Raritan bay.	
N. Y. Oyster Co	1,030	207.5	Raritan bay.	
Henry C. Rowe	1,031	1,163.7	Raritan bay.	
Chas. Schopp	1,032	1.2	Raritan bay.	
Chas. Schopp	1,033	1.1	Raritan bay.	
John M. Benner	990A	50.0	Raritan bay.	
John M. Benner	989A	150.0	Raritan bay.	
Geo. M. Still	989B	50.0	Raritan bay.	
Geo. M. Still	990B	50.0	Raritan bay.	
W. C. Porth Co	781	42.8	Raritan bay...	Relocation survey.
J. Frank Terry	997	108.4	Raritan bay.	
J. Frank Terry	992	50.0	Raritan bay.	
Number of lots	16	2,648.6		
N. Y. Oyster Co	14	545.0	Hudson river.	
N. Y. Oyster Co	15	169.4	Hudson river.	
N. Y. Oyster Co	16	55.9	Hudson river.	
N. Y. Oyster Co	17	165.5	Hudson river.	
N. Y. Oyster Co	18	36.2	Hudson river.	
Number of lots	5	972.0		
TOWNSHIPS				
Fred Ronik	3,357 4,457	56.5	L. I. Sound.	
Edwin H. Lewis	328	26.2	L. I. Sound.	
Number of lots	2	82.7		
N. Y. Oyster Co	E-1	63.3	East river.	

Total number of lots	23
Total acreage	3,769.6

RECEIPTS OF THE BUREAU OF MARINE FISHERIES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1914

	Rentals	Taxes	Penalty	Interest	License fee	Certificates	Recording fee	Miscellaneous	Total
October 31, 1913	$3,278 63	$100 60	$19 94	$3 75	$5 00	.....	$4 50	.....	$3,412 42
November 30, 1913	1,215 25	.....	.....	.....	.....	.....	8 75	.....	1,224 00
December 31, 1913	2,267 65	23 52	1 59	2 17	.....	.....	13 50	7 35	2,315 78
January 31, 1914	2,865 70	3 58	72	75	25 00	.....	2 00	10 00	2,907 75
February 28, 1914	3,232 75	6,056 71	54 06	12	30 00	.....	6 00	.....	9,379 64
March 31, 1914	1,220 72	571 09	8 30	.....	200 00	.....	10 75	5 50	2,016 36
April 30, 1914	2,736 50	393 47	17 34	1 68	340 00	.....	11 00	21 10	3,521 09
May 31, 1914	495 50	255 88	5 25	1 29	430 00	.....	5 00	1 00	1,193 92
June 30, 1914	2,350 93	201 79	3 52	1 51	965 00	$33 00	8 00	2 00	3,565 75
July 31, 1914	1,412 50	60 90	12 18	06	325 00	.....	22 00	.....	1,832 64
August 31, 1914	1,098 40	.....	.....	.....	5 00	.....	70 50	.....	1,173 90
September 30, 1914	849 89	2 50	50	24	.....	.....	1 75	2 00	856 88
Total	$23,024 42	$7,670 04	$123 40	$11 57	$2,325 00	$33 00	$163 75	$48 95	$33,400 13

RENTS DUE AND COLLECTED FOR CURRENT YEAR, OCTOBER 1, 1913, TO OCTOBER 1, 1914

Schedule "A"

Name	Date	Lease No.	Amount
Wm. John McGrory	Oct. 8, 1913	801	$10 30
Pausch Bros. Oyster Co	Oct. 8, 1913	1,320	288 00
Charles Olsen	Oct. 9, 1913	1,361	4 40
Geo. M. Still, Inc	Oct. 14, 1913	685	1 35
Geo. M. Still, Inc	Oct. 14, 1913	686	35
Geo. M. Still, Inc	Oct. 14, 1913	1,330	13 60
Elmer I. Palmer	Oct. 14, 1913	692	1 15
Elmer I. Palmer	Oct. 14, 1913	700	15 63
Elmer I. Palmer	Oct. 14, 1913	732	8 20
Elmer I. Palmer	Oct. 14, 1913	733	3 75
Elmer I. Palmer	Oct. 14, 1913	739	8 00
A. L. Field	Oct. 15, 1913	1,083	8 80
Howard Gould	Oct. 15, 1913	624	26 50
Howard Gould	Oct. 15, 1913	625	6 40
John I. Merrell	Oct. 16, 1913	1,434	42 80
E. M. Gunn	Oct. 16, 1913	556	1 30
N. S. Ackerly & Son Co	Oct. 16, 1913	1,383	300 00
N. S. Ackerly & Son Co	Oct. 16, 1913	1,410	200 00
John T. Bird	Oct. 16, 1913	551	6 15
Jesse V. Golden	Oct. 16, 1913	1,365	4 40
Geo. W. Robinson	Oct. 17, 1913	1,426	6 00
Benjamin M. Merrill	Oct. 17, 1913	779	40
Benjamin M. Merrill	Oct. 17, 1913	780	50
Benjamin M. Merrill	Oct. 17, 1913	781	70
Charles V. Leviness	Oct. 17, 1913	761	1 80
Charles V. Leviness	Oct. 17, 1913	762	1 00
Lars Larsen	Oct. 17, 1913	1,357	4 00
Lars Larsen	Oct. 17, 1913	1,358	2 40
Androvette & Thompson	Oct. 21, 1913	1,088	18 00
Androvette & Thompson	Oct. 21, 1913	1,335	40 00
Androvette & Thompson	Oct. 21, 1913	1,336	46 40
Matinecock Oyster Co	Oct. 21, 1913	629	9 60
Matinecock Oyster Co	Oct. 21, 1913	636	6 05
Matinecock Oyster Co	Oct. 21, 1913	1,070	400 00
Bayles, Bumstead & Fletcher	Oct. 21, 1913	699	45 05
Bayles & Thorne	Oct. 21, 1913	555	15 70
Bayles & Thorne	Oct. 21, 1913	702	10 95
Bayles & Thorne	Oct. 21, 1913	1,348	57 20
S. Y. Bayles	Oct. 21, 1913	588	7 25
Jacob Brady	Oct. 21, 1913	745	6 90
Polworth & Elsworth	Oct. 23, 1913	586	3 13
Polworth & Elsworth	Oct. 23, 1913	644	55
Polworth & Elsworth	Oct. 23, 1913	645	2 30
Polworth & Elsworth	Oct. 23, 1913	725	4 50
Polworth & Elsworth	Oct. 23, 1913	724	13 50
Polworth & Elsworth	Oct. 23, 1913	1,432	22 80
Polworth & Elsworth	Oct. 23, 1913	1,433	91 60
New York Oyster Co	Oct. 23, 1913	545	12 45
New York Oyster Co	Oct. 23, 1913	587	2 80
New York Oyster Co	Oct. 23, 1913	680	1 20
New York Oyster Co	Oct. 23, 1913	681	3 45
New York Oyster Co	Oct. 23, 1913	682	12 55
New York Oyster Co	Oct. 23, 1913	695	173 90
New York Oyster Co	Oct. 23, 1913	705	75
New York Oyster Co	Oct. 23, 1913	706	23 90
New York Oyster Co	Oct. 23, 1913	707	2 50

RENTS DUE AND COLLECTED FOR CURRENT YEAR —(*Continued*)

Name	Date	Lease No.	Amount
New York Oyster Co	Oct. 23, 1913	709	$0 25
New York Oyster Co	Oct. 23, 1913	714	20 10
New York Oyster Co	Oct. 23, 1913	717	7 40
New York Oyster Co	Oct. 23, 1913	726	2 10
New York Oyster Co	Oct. 23, 1913	727	40
New York Oyster Co	Oct. 23, 1913	1,164	135 40
New York Oyster Co	Oct. 23, 1913	1,165	13 20
New York Oyster Co	Oct. 23, 1913	1,166	334 00
New York Oyster Co	Oct. 23, 1913	1,321	64 00
New York Oyster Co	Oct. 23, 1913	1,384	17 20
New York Oyster Co	Oct. 23, 1913	1,421	200 00
New York Oyster Co	Oct. 23, 1913	1,430	126 80
New York Oyster Co	Oct. 23, 1913	1,436	88 40
New York Oyster Co	Oct. 23, 1913	1,437	25 60
New York Oyster Co	Oct. 23, 1913	1,438	203 60
Lars Larsen	Oct. 24, 1913	1,356	1 20
H. E. Mackey	Oct. 25, 1913	553	3 52
Chas. Weber	Oct. 25, 1913	588	7 25
Chas. Weber	Oct. 25, 1913	1,360	3 20
Chas. Weber	Oct. 25, 1913	1,362	1 20
Lucius C. Jones	Oct. 27, 1913	589	6 30
Alfred Jones	Oct. 27, 1913	552	6 25
John C. Allen	Oct. 31, 1913	557	1 45
John C. Allen	Oct. 31, 1913	702	5 50
John C. Allen	Oct. 31, 1913	704	1 45
Bayles & Still	Nov. 1, 1913	1,411	100 00
Merrell & Burbank	Nov. 1, 1913	1,331	266 40
Merrell & Burbank	Nov. 1, 1913	1,332	150 00
Daniel Burbank	Nov. 3, 1913	1,084	39 60
F. F. Downs	Nov. 7, 1913	1,329	120 00
F. F. Downs	Nov. 7, 1913	1,425	94 00
New York Oyster Co	Nov. 7, 1913	1,468	7 40
Henry S. Marshall	Nov. 11, 1913	728	75
Henry S. Marshall	Nov. 11, 1913	730	75
Henry S. Marshall	Nov. 11, 1913	1,448	4 40
Stubbs & Allen	Nov. 11, 1913	553	4 20
Henry Stubbs	Nov. 11, 1913	553	6 25
Henry Stubbs	Nov. 11, 1913	554	2 00
Timothy T. Mott	Nov. 11, 1913	1,355	2 40
E. H. Mackey, Jr	Nov. 18, 1913	553	6 75
E. H. Mackey, Jr	Nov. 18, 1913	557	8 50
E. H. Mackey, Jr	Nov. 18, 1913	702	6 30
Charles Cowens	Nov. 18, 1913	553	3 95
Christian Hoobs	Nov. 22, 1913	1,075	7 20
Weber & Degenhardt	Nov. 29, 1913	1,364	44 00
David B. Colon	Dec. 8, 1913	689	2 40
Pausch Bros. Oyster Co	Dec. 10, 1913	1,412	25 00
Pausch Bros. Oyster Co	Dec. 10, 1913	1,413	50 00
Selah T. Clock	Dec. 15, 1913	1,418	400 00
Selah T. Clock	Dec. 15, 1913	1,419	600 00
Selah T. Clock	Dec. 15, 1913	1,420	600 00
Joseph B. Glasier	Dec. 27, 1913	746	45
F. C. & H. A. Glasier	Dec. 27, 1913	753	55
F. C. & H. A. Glasier	Dec. 27, 1913	754	4 15
John M. Benner	Jan. 7, 1914	628	2 35
John M. Benner	Jan. 7, 1914	732	6 45
John M. Benner	Jan. 7, 1914	633	13 50
John M. Benner	Jan. 7, 1914	634	7 60
John M. Benner	Jan. 7, 1914	635	60 60

RENTS DUE AND COLLECTED FOR CURRENT YEAR —(*Continued*)

Name	Date	Lease No.	Amount
John M. Benner	Jan. 7, 1914	637	$23 85
John M. Benner	Jan. 7, 1914	638	16 35
John M. Benner	Jan. 7, 1914	639	4 40
John M. Benner	Jan. 7, 1914	712	54 05
John M. Benner	Jan. 7, 1914	713	29 55
John M. Benner	Jan. 7, 1914	720	41 10
John M. Benner	Jan. 7, 1914	721	45 00
John M. Benner	Jan. 7, 1914	734	19 25
John M. Benner	Jan. 7, 1914	1,071	244 40
John M. Benner	Jan. 7, 1914	1,094	840 40
John M. Benner	Jan. 7, 1914	1,116	300 00
John M. Benner	Jan. 7, 1914	1,117	685 20
John M. Benner	Jan. 7, 1914	1,414	186 00
Standard Oyster Co	Jan. 7, 1914	1,341	10 00
Standard Oyster Co	Jan. 7, 1914	1,342	12 60
Standard Oyster Co	Jan. 7, 1914	1,343	8 40
Standard Oyster Co	Jan. 7, 1914	1,344	8 60
W. H. Lockwood	Jan. 7, 1914	543	38 80
W. H. Lockwood	Jan. 7, 1914	683	9 00
W. H. Lockwood	Jan. 7, 1914	684	9 85
Fred. Denz	Jan. 24, 1914	1,347	34 40
Greenport Oyster Co	Feb. 9, 1914	1,473	120 00
Loundes, Mills & Ockers	Feb. 9, 1914	1,363	2 00
Loundes & Mills	Feb. 9, 1914	553	6 10
Loundes & Mills	Feb. 9, 1914	630	10 15
Loundes & Mills	Feb. 9, 1914	1,429	239 20
Loundes, Mills & Thorne	Feb. 9, 1914	1,350	21 20
Loundes, Mills & Thorne	Feb. 9, 1914	1,351	8 00
Loundes, Mills & Thorne	Feb. 9, 1914	1,352	44 40
Loundes, Mills & Thorne	Feb. 9, 1914	1,353	8 80
Wm. J. Mills	Feb. 9, 1914	1,109	120 00
Wm. J. Mills	Feb. 9, 1914	1,115	40 00
Wm. J. Mills	Feb. 9, 1914	1,403	2 00
Wm. J. Mills	Feb. 9, 1914	1,406	588 00
Rudolph Merrell	Feb. 9, 1914	1,107	216 00
Glenwood Oyster Co	Feb. 9, 1914	547	39 85
Glenwood Oyster Co	Feb. 9, 1914	715	3 95
Glenwood Oyster Co	Feb. 9, 1914	631	7 35
Merrell & Bayles	Feb. 9, 1914	1,349	11 20
Merrell & Bayles	Feb. 9, 1914	1,366	38 00
Mills & Ronik	Mar. 4, 1914	736	16 25
Wm. J. Mills	Mar. 4, 1914	1,348	80 00
Pausch Bros. Oyster Co	Mar. 16, 1914	1,168	71 20
Sealshipt Oyster System	Mar. 19, 1914	546	10 90
Sealshipt Oyster System	Mar. 19, 1914	716	9 10
Sealshipt Oyster System	Mar. 19, 1914	720	63 90
Sealshipt Oyster System	Mar. 19, 1914	736	22 17
Sealshipt Oyster System	Mar. 19, 1914	1,092	7 20
Sealshipt Oyster System	Mar. 19, 1914	1,156	120 00
Sealshipt Oyster System	Mar. 19, 1914	1,110	130 00
Sealshipt Osyter System	Mar. 19, 1914	1,431	85 20
Lewis Bros	Mar. 24, 1914	741	5 15
Lewis Bros	Mar. 24, 1914	742	21 05
Geo. H. Valentine	Mar. 26, 1914	1,334	68 40
Bell, Fordham & Bell	Mar. 26, 1914	550	6 40
Wm. Ruddock	April 15, 1914	1,157	1 50
R. R. Mott	April 24, 1914	1,354	2 80
Thomas Hassett, Jr	April 30, 1914	1,441	404 80
Stephen Collins	June 1, 1914	755	3 20

RENTS DUE AND COLLECTED FOR CURRENT YEAR —(*Continued*)

Name	Date	Lease No.	Amount
Stephen Collins	June 1, 1914	756	$3 60
Stephen Collins	June 1, 1914	757	1 00
John I. Merrell	June 2, 1914	1,434	42 80
Alex. C. Frazer	June 6, 1914	649	25
Alex. C. Frazer Co	June 6, 1914	1,408	164 40
Alex. C. Frazer Co	June 6, 1914	1,435	60 00
Sofield & Frazer	June 6, 1914	1,409	208 80
Frazer & Houghwout	June 6, 1914	1,439	20 00
Frazer & Houghwout	June 6, 1914	1,444	60 00
W. H. Houghwout	June 6, 1914	1,089	8 40
W. H. Houghwout	June 6, 1914	1,333	1 25
Alex. Frazer Co	June 6, 1914	1,445	304 20
Alex. Frazer Co	June 6, 1914	1,446	370 20
Jas. A. Cochrane	June 8, 1914	1,415	433 60
Jas. A. Cochrane	June 8, 1914	1,417	300 00
Azel F. Merrell	June 16, 1914	1,082	4 00
Azel F. Merrell	June 16, 1914	1,340	182 20
Azel F. Merrell	June 16, 1914	1,316	114 00
John J. Ferry	July 9, 1914	791	12 00
John J. Ferry	July 9, 1914	792	3 00
John J. Ferry	July 9, 1914	793	14 55
John J. Ferry	July 9, 1914	794	2 70
John J. Ferry	July 9, 1914	795	3 90
Azel F. Merrell	July 23, 1914	1,104	134 40
Azel F. Merrell	July 23, 1914	1,105	637 60
Azel F. Merrell	July 23, 1914	1,106	504 00
Merrell & Bayles	July 23, 1914	1,349	11 20
Merrell & Bayles	July 23, 1914	1,366	38 00
Glenwood Oyster Co	July 23, 1914	547	39 85
Glenwood Oysetr Co	July 23, 1914	631	7 35
Glenwood Oyster Co	July 23, 1914	715	3 95
New York Oyster Co	Sept. 19, 1914	1,322	20 00
New York Oyster Co	Sept. 19, 1914	1,430	29 17
New York Oyster Co	Sept. 19, 1914	1,438	113 23
New York Osyter Co	Sept. 19, 1914	1,442	54 12
New York Oyster Co	Sept. 19, 1914	1,443	61 87
New York Oyster Co	Sept. 19, 1914	1,458	272 30
New York Oyster Co	Sept. 19, 1914	1,460	1 60
New York Oyster Co	Sept. 19, 1914	1,464	5 61
New York Osyter Co	Sept. 19, 1914	1,466	1 89
New York Oyster Co	Sept. 19, 1914	1,467	1 19
New York Oyster Co	Sept. 19, 1914	1,468	99
New York Oyster Co	Sept. 19, 1914	1,469	12 49
New York Oyster Co	Sept. 19, 1914	1,470	1 05
New York Oyster Co	Sept. 19, 1914	1,471	31
New York Oyster Co	Sept. 19, 1914	1,480	49
James A. Cochrane	Sept. 21, 1914	1,416	75 00
			$15,560 26

RENTS COLLECTED DURING THE FISCAL YEAR FOR LEASES THAT FALL DUE AT IRREGULAR PERIODS EXTENDING TO CORRESPONDING DATES IN 1914–1915

Schedule "B"

Name	Date	Lease No.	Amount
New York Oyster Co	Nov. 7, 1913	1,475	$126 60
Thomas Hassett, Jr	Nov. 7, 1913	1,474	100 80
New York Oyster Co	Nov. 7, 1913	1,469	93 20
New York Oyster Co	Nov. 7, 1913	1,470	4 80
New York Oyster Co	Nov. 7, 1913	1,471	5 40
New York Oyster Co	Nov. 7, 1913	1,472	9 60
S. Y. Bayles	Dec. 18, 1913	1,476	143 40
New York Oyster Co	Dec. 27, 1913	1,477	21 50
New York Oyster Co	Dec. 27, 1913	1,478	162 40
New York Oyster Co	Dec. 27, 1913	1,479	249 20
New York Oyster Co	Dec. 27, 1913	1,480	8 60
James A. Cochrane	Jan. 2, 1914	1,416	150 00
Pausch Bros. Oyster Co	Jan. 14, 1914	723	4 40
Pausch Bros. Oyster Co	Feb. 13, 1914	640	29 15
New York Oyster Co	Feb. 13, 1914	1,481	932 00
New York Oyster Co	Feb. 13, 1914	1,485	145 40
Geo. M. Still, Inc	Feb. 25, 1914	1,482	200 00
Clarence De Hart	Feb. 26, 1914	1,483	300 00
Clarence De Hart	Feb. 26, 1914	1,484	100 00
New York Oyster Co	Mar. 24, 1914	1,486	60 80
New York Oyster Co	Mar. 24, 1914	1,487	25 60
New York Oyster Co	Mar. 24, 1914	1,488	2 40
New York Oyster Co	Mar. 24, 1914	1,489	415 00
E. D. McCarthy	April 20, 1914	1,491	2,327 40
Pausch Bros. Oyster Co	May 19, 1914	1,450	92 60
Pausch Bros. Oyster Co	May 19, 1914	1,451	151 00
Pausch Bros. Oyster Co	May 19, 1914	641	6 25
Pausch Bros. Oyster Co	May 19, 1914	1,452	183 60
Pausch Bros. Oyster Co	May 19, 1914	696	37 50
Pausch Bros. Oyster Co	May 19, 1914	698	24 55
Pausch Bros. Oyster Co	June 13, 1914	697	15 63
Edwin H. Lewis	June 16, 1914	1,492	52 40
Christian Walle	Aug. 12, 1914	1,449	8 40
New York Oyster Co	Aug. 28, 1914	1,493	1,090 00
Geo. M. Still, Inc	Sept. 11, 1914	1,457	59 40
Philip W. Russell	Sept. 19, 1914	1,431	33 14
Philip W. Russell	Sept. 19, 1914	1,440	92 04
			$7,464 16

SCHEDULE OF RENTALS

Schdule A	$15,560 26
Schedule B	7,464 16
Total	$23,024 42

TAXES, PENALTY AND INTEREST COLLECTED FROM OCTOBER 1, 1913, TO SEPTEMBER 30, 1914

NAME	Date	Lot	Tax	Penalty	Interest
Purity Blue Oyster Co	Oct. 24, 1913	Several.	$60 00	$12 00	*
Antoinette S. Lamb	Oct. 24, 1913	32	19 85	3 97	(Tax 1912)
Antoinette S. Lamb	Oct. 24, 1913	32	19 85	3 97	$3 59
Christian Hoobs	Oct. 28, 1913	619	90	.....	16
Thomas S. Merrell	Dec. 29, 1913	529	4 03	.....	32
Thomas S. Merrell	Dec. 29, 1913	527	1 28	.....	10
Thomas S. Merrell	Dec. 29, 1913	525	1 03	.....	08
Thomas S. Merrell	Dec. 29, 1913	523	22	.....	08
Thomas S. Merrell	Dec. 29, 1913	533	1 35	.....	10
Thomas S. Merrell	Dec. 29, 1913	535	93	.....	08
Thomas S. Merrell	Dec. 29, 1913	844	75	.....	08
Thomas S. Merrell	Dec. 29, 1913	693	60	.....	08
Thomas S. Merrell	Dec. 29, 1913	222	3 70	.....	30
Thomas S. Merrell	Dec. 29, 1913	148A	1 20	.....	10
Lillie Merrell	Dec. 29, 1913	677	50	.....	04
Abram Manee	Dec. 29, 1913	461	50	10	08
Abram Manee	Dec. 29, 1913	817	50	10	08
Abram Manee	Dec. 29, 1913	815	1 20	24	11
Abram Manee	Dec. 29, 1913	808	1 10	22	10
Abram & Wm. Manee	Dec. 29, 1913	832	28	06	03
Abram & Wm. Manee	Dec. 29, 1913	806	85	17	08
Abram & Wm. Manee	Dec. 29, 1913	816	75	15	07
Abram & Wm. Manee	Dec. 29, 1913	814	1 65	33	16
Abram & Wm. Manee	Dec. 29, 1913	819	1 10	22	10
Elmer Price	Jan. 26, 1914	274	45	09	.....
Elmer Price	Jan. 26, 1914	260	75	15	.....
Elmer Price	Jan. 26, 1914	264	30	06	.....
Elmer Price	Jan. 26, 1914	268	40	08	.....
Elmer Price	Jan. 26, 1914	250	38	08	.....
Elmer Price	Jan. 26, 1914	244	20	04	.....
Elmer Price	Jan. 26, 1914	272	50	10	.....
Elmer Price	Jan. 26, 1914	712	35	07	.....
Elmer Price	Jan. 26, 1914	6	25	05	75
Mary Johnson	Feb. 3, 1914	96	75	.....	.....
Richard Johnson	Feb. 3, 1914	91	80	.....	.....
Richard Johnson	Feb. 3, 1914	92	45	.....	.....
M. H. Sickman	Feb. 3, 1914	590	1 80	36	.....
Andrew Anderson	Feb. 3, 1914	424	70	14	†12
Andrew Anderson	Feb. 3, 1914	424	70	14	.....
David Decker	Feb. 3, 1914	686	1 65	33	.....
F. W. Lewis	Feb. 4, 1914	13	15 30	3 06	.....
Charles Churchill	Feb. 4, 1914	181	1 45	29	.....
Geo. Marshall	Feb. 4, 1914	231	1 00	.....	.....
Geo. Marshall	Feb. 4, 1914	267	1 70	.....	.....
Marshall & Bedell	Feb. 4, 1914	772	58	.....	.....
Smith Sprague	Feb. 4, 1914	394	45	09	.....
Smith Sprague	Feb. 4, 1914	390	1 00	20	.....
Smith Sprague	Feb. 4, 1914	570	1 25	24	.....
Smith Sprague	Feb. 4, 1914	417	40	08	.....
Smith Sprague	Feb. 4, 1914	416	55	11	.....
Smith Sprague	Feb. 4, 1914	393	40	08	.....
Smith Sprague	Feb. 4, 1914	438	75	15	.....
Smith Sprague	Feb. 4, 1914	388	90	18	.....
Sprague & Doughty	Feb. 4, 1914	444	43	09	.....
Sprague & Doughty	Feb. 4, 1914	381	85	17	.....
Sprague & Doughty	Feb. 4, 1914	447	80	16	.....
Sprague & Doughty	Feb. 4, 1914	382	60	12	.....
Sprague & Doughty	Feb. 4, 1914	387	3 45	68	.....
Sprague & Doughty	Feb. 4, 1914	418	75	15	.....
Sprague & Doughty	Feb. 4, 1914	442	1 30	26	.....
Sprague & Doughty	Feb. 4, 1914	380	20	04	.....
Sprague & Doughty	Feb. 4, 1914	379	45	09	.....
Howard Gould	Feb. 4, 1914	117	26 50	.....	.....
Howard Gould	Feb. 4, 1914	118	6 40	.....	.....
J. W. Cole	Feb. 4, 1914	469	28	.....	.....
J. W. Cole	Feb. 4, 1914	507	1 22	.....	.....
Jane Johnson	Feb. 4, 1914	132	1 25	25	.....
Geo. H. Johnson	Feb. 4, 1914	94	45	09	.....
J. E. Still	Feb. 4, 1914	69	55	.....	.....

* 1911. † 1912.

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
J. E. Still	Feb. 4, 1914	66	$0 50	.....	.....
J. E. Still	Feb. 4, 1914	341	55	.....	.....
J. E. Still	Feb. 4, 1914	69	20	.....	.....
J. E. Still	Feb. 4, 1914	1008	12 50	.....	.....
W. J. Hewlett	Feb. 4, 1914	539	2 10	$0 42	.....
Wm. Buchanan	Feb. 4, 1914	42	1 18	24	.....
Wm. Buchanan	Feb. 4, 1914	690	63	13	.....
Northport Oyster Co	Feb. 4, 1914	Several	16 25	3 25	.....
Major G. Abrams	Feb. 4, 1914	628	15	.....	.....
W. W. Smith	Feb. 4, 1914	67	3 08	62	.....
Geo. W. Robinson	Feb. 4, 1914	912	75	15	.....
Adaline Bedell	Feb. 4, 1914	185	30	.....	.....
Estate, Charles Bedell	Feb. 4, 1914	183	50	.....	.....
Estate, Charles Bedell	Feb. 4, 1914	821	45	.....	.....
Estate, Charles Bedell	Feb. 4, 1914	820	80	.....	.....
Estate, Charles Bedell	Feb. 4, 1914	770	35	.....	.....
Arthur Johnson	Feb. 5, 1914	558	1 00	.....	.....
Geo. S. Monroe	Feb. 5, 1914	474	3 50	70	.....
Geo. M. Still, Inc	Feb. 5, 1914	284	1 65	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	171	3 20	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	824	80	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	660	53	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	521	67	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	542	53	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	441	1 35	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	401	75	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	805	2 65	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	253	65	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	823	60	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	440	35	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	946	1 35	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	947	35	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	849	1 70	.....	.....
Geo. M. Still, Inc	Feb. 5, 1914	1021	7 43	.....	.....
Lars Larsen	Feb. 5, 1914	11	50	10	.....
Lars Larsen	Feb. 5, 1914	13	30	06	.....
Sealshipt Oyster System	Feb. 5, 1914	9	26 65	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	10	26 53	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	8	26 60	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	7	26 95	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	6	27 23	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	5	27 38	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	4	27 55	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	3	26 25	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	2	28 20	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	1	28 30	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	28	19 05	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	27	48 38	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Section C	62 50	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	25 00	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	25 00	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	20	62 40	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	19	62 25	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	22	14 72	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	21	18 63	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	18	62 25	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	40	11 57	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	26	28 93	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	737	1 65	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	498	2 37	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	259	1 65	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	354	48	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	490	2 45	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	463	1 65	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	37 50	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	62 50	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	62 50	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several.	65 00	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	881	37 80	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	20 00	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	20 00	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	20 00	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	37 50	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
Sealshipt Oyster System	Feb. 5, 1914	Several	$60 00	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	17 50	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	88	32 05	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	22 18	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	63 90	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	929	10 90	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	966	9 10	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	688	90	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	15 00	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	Several	16 25	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	542	70	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	64	25	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	209	3 15	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	68	50	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	202	3 55	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	327	2 90	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	913	10 65	.....	.....
Sealshipt Oyster System	Feb. 5, 1914	924	14 55	.....	.....
J. C. Wynant	Feb. 5, 1914	765	20	.....	.....
Wm. F. Schmeelk	Feb. 5, 1914	30	60	$0 12	.....
Peter Miller	Feb. 5, 1914	1	95	.....	.....
Peter Miller	Feb. 5, 1914	16	1 20	.....	.....
Ludwig Klee	Feb. 5, 1914	208	10	02	.....
Ludwig Klee	Feb. 5, 1914	70	40	08	.....
Ludwig Klee	Feb. 5, 1914	554	2 15	42	.....
Ludwig Klee	Feb. 5, 1914	63	1 55	30	.....
L., & R. L. Klee	Feb. 5, 1914	307	2 55	51	.....
John F. Quigley	Feb. 5, 1914	8	90	18	.....
Geo. W. Sanbeg	Feb. 5, 1914	948	3 20	.....	.....
Geo. W. Sanbeg	Feb. 5, 1914	522	1 05	.....	.....
J. J. Manee	Feb. 5, 1914	658	10	.....	.....
J. J. Manee	Feb. 5, 1914	64	1 00	.....	.....
Wilbur Manee	Feb. 5, 1914	156	53	.....	.....
Wilbur Manee	Feb. 5, 1914	76	53	.....	.....
Wilbur Manee	Feb. 5, 1914	452	58	.....	.....
Charles Olson	Feb. 5, 1914	9	55	.....	.....
M. & P. M. Van Name	Feb. 6, 1914	12	1 65	32	.....
M. & P. M. Van Name	Feb. 6, 1914	12½	10	02	.....
John T. Bird	Feb. 6, 1914	91	6 15	.....	.....
Emma W. Abrams	Feb. 6, 1914	268	50	10	.....
Emma W. Abrams	Feb. 6, 1914	267	55	11	.....
Clarence Lissenden	Feb. 6, 1914	172	1 25	.....	.....
Polworth & Elsworth	Feb. 6, 1914	376	1 35	.....	.....
Polworth & Elsworth	Feb. 6, 1914	245	90	.....	.....
Polworth & Elsworth	Feb. 6, 1914	157	2 07	.....	.....
Polworth & Elsworth	Feb. 6, 1914	243	1 75	.....	.....
Polworth & Elsworth	Feb. 6, 1914	247	1 63	.....	.....
Polworth & Elsworth	Feb. 6, 1914	233	2 75	.....	.....
Polworth & Elsworth	Feb. 6, 1914	436	1 07	.....	.....
Polworth & Elsworth	Feb. 6, 1914	511	3 37	.....	.....
Polworth & Elsworth	Feb. 6, 1914	513	58	.....	.....
Polworth & Elsworth	Feb. 6, 1914	438	2 00	.....	.....
Polworth & Elsworth	Feb. 6, 1914	235	1 60	.....	.....
Polworth & Elsworth	Feb. 6, 1914	237	3 60	.....	.....
Polworth & Elsworth	Feb. 6, 1914	239	5 12	.....	.....
Polworth & Elsworth	Feb. 6, 1914	251	65	.....	.....
Polworth & Elsworth	Feb. 6, 1914	558	1 38	.....	.....
Polworth & Elsworth	Feb. 6, 1914	628	28	.....	.....
Polworth & Elsworth	Feb. 6, 1914	462	50	.....	.....
Polworth & Elsworth	Feb. 6, 1914	133	48	.....	.....
Polworth & Elsworth	Feb. 6, 1914	372	50	.....	.....
Polworth & Elsworth	Feb. 6, 1914	657	45	.....	.....
Polworth & Elsworth	Feb. 6, 1914	559	1 00	.....	.....
Polworth & Elsworth	Feb. 6, 1914	603	63	.....	.....
Polworth & Elsworth	Feb. 6, 1914	931	3 12	.....	.....
Polworth & Elsworth	Feb. 6, 1914	943	55	.....	.....
Polworth & Elsworth	Feb. 6, 1914	935	2 30	.....	.....
Polworth & Elsworth	Feb. 6, 1914	971	13 50	.....	.....
Polworth & Elsworth	Feb. 6, 1914	965	4 50	.....	.....
Polworth & Elsworth	Feb. 6, 1914	917	2 85	.....	.....
Polworth & Elsworth	Feb. 6, 1914	915	11 45	.....	.....
New York Oyster Co	Feb. 6, 1914	943	12 55	.....	.....
New York Oyster Co	Feb. 6, 1914	622	4 23	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
New York Oyster Co	Feb. 6, 1914	565	$0 63	.....	.....
New York Oyster Co	Feb. 6, 1914	549	65	.....	.....
New York Oyster Co	Feb. 6, 1914	478	70	.....	.....
New York Oyster Co	Feb. 6, 1914	932	2 80	.....	.....
New York Oyster Co	Feb. 6, 1914	941	1 20	.....	.....
New York Oyster Co	Feb. 6, 1914	540	3 35	.....	.....
New York Oyster Co	Feb. 6, 1914	942	3 45	.....	.....
New York Oyster Co	Feb. 6, 1914	959	2 50	.....	.....
New York Oyster Co	Feb. 6, 1914	957	75	.....	.....
New York Oyster Co	Feb. 6, 1914	958	23 90	.....	.....
New York Oyster Co	Feb. 6, 1914	604	35	.....	.....
New York Oyster Co	Feb. 6, 1914	967	16 75	.....	.....
New York Oyster Co	Feb. 6, 1914	968	1 85	.....	.....
New York Oyster Co	Feb. 6, 1914	962	25	.....	.....
New York Oyster Co	Feb. 6, 1914	930	12 45	.....	.....
New York Oyster Co	Feb. 6, 1914	1	73 72	.....	.....
New York Oyster Co	Feb. 6, 1914	970	2 10	.....	.....
New York Oyster Co	Feb. 6, 1914	969	40	.....	.....
New York Oyster Co	Feb. 6, 1914	3	16 90	.....	.....
New York Oyster Co	Feb. 6, 1914	4	1 65	.....	.....
New York Oyster Co	Feb. 6, 1914	2	41 75	.....	.....
New York Oyster Co	Feb. 6, 1914	987	25 00	.....	.....
New York Oyster Co	Feb. 6, 1914	1003	15 85	.....	.....
New York Oyster Co	Feb. 6, 1914	916	11 05	.....	.....
New York Oyster Co	Feb. 6, 1914	918	3 20	.....	.....
New York Oyster Co	Feb. 6, 1914	1006	25 45	.....	.....
New York Oyster Co	Feb. 6, 1914	926	9 85	.....	.....
New York Oyster Co	Feb. 6, 1914	1009	11 25	.....	.....
New York Oyster Co	Feb. 6, 1914	5	71 00	.....	.....
New York Oyster Co	Feb. 6, 1914	1022	8 48	.....	.....
New York Oyster Co	Feb. 6, 1914	983	2 15	.....	.....
New York Oyster Co	Feb. 6, 1914	975	8 00	.....	.....
New York Oyster Co	Feb. 6, 1914	976	2 50	.....	.....
New York Oyster Co	Feb. 6, 1914	12	93	.....	.....
New York Oyster Co	Feb. 6, 1914	13	11 65	.....	.....
New York Oyster Co	Feb. 6, 1914	1	15 83	.....	.....
New York Oyster Co	Feb. 6, 1914	11	3 05	.....	.....
New York Oyster Co	Feb. 6, 1914	8	1 03	.....	.....
New York Oyster Co	Feb. 6, 1914	10	53	.....	.....
New York Oyster Co	Feb. 6, 1914	7	60	.....	.....
New York Oyster Co	Feb. 6, 1914	467	1 03	.....	.....
New York Oyster Co	Feb. 6, 1914	836	1 07	.....	.....
New York Oyster Co	Feb. 6, 1914	1024	1 08	.....	.....
New York Oyster Co	Feb. 6, 1914	201	2 65	.....	.....
New York Oyster Co	Feb. 6, 1914	1027	20 30	.....	.....
New York Oyster Co	Feb. 6, 1914	1025	31 15	.....	.....
New York Oyster Co	Feb. 6, 1914	9	67	.....	.....
J. W. Elsworth	Feb. 6, 1914	130	1 80	.....	.....
Thomas Silk	Feb. 6, 1914	613	23	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	623	97	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	621	1 05	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	299	95	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	617	2 92	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	546	1 45	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	632	6 17	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	619	2 95	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	497	85	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	495	3 23	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	496	1 52	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	443	1 10	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	441	2 50	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	148	16 97	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	197	2 50	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	701	1 67	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	655	1 23	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	742	38	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	855	4 42	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	648	1 40	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	650	2 98	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	124	45	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	432	85	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
J. & J. W. Elsworth Co	Feb. 6, 1913	360	$1 63	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	362	28	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	786	45	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	305	30	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1913	680	33	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	501	2 15	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	758	78	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	809	35	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	810	35	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	202	1 15	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	367	1 08	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	505	1 52	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	172	2 50	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	487	5 30	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	692	4 25	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	87	68	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	785	9 45	.....	.....
J. & J. W. Elsworth Co	Fab. 6, 1914	556	50	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	234	50	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	602	43	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	631	38	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	208	40	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	625	65	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	633	50	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	269	85	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	629	35	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	273	70	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	618	43	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	346	2 93	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	559	1 35	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	534	78	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	182	60	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	532	54	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	184	70	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	634	63	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	636	1 70	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	638	1 32	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	165	7 05	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	194	1 50	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	630	43	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	365	1 93	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	373	1 15	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	363	2 00	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	371	1 28	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	369	3 65	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	254	2 78	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	637	43	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	842	2 05	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	831	80	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	166	1 48	.....	.....
J. & J. W. Elsworth Co	Feb. 5, 1914	249	25	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	301	1 90	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	307	1 40	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	788	45	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	105	1 25	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	313	3 52	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	293	70	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	26	25	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	142-A	5 52	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1913	132	3 15	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1913	303	55	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	393	85	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	782	45	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	517	1 30	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	811	1 20	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	439	11 00	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	534	1 52	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	215	3 19	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	775	60	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	81	32	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	80	60	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	86	1 08	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	79	33	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
J. & J. W. Elsworth Co	Feb. 6, 1914	455	$0 23	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1913	285	45	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	84	1 95	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	85	35	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	295	1 40	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	673	45	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	169	40	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	111	1 95	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	82	33	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	297	1 02	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	639	1 45	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	667	85	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	672	28	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	755	40	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	643	1 70	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	600	95	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	729	40	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	83	70	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	787	2 50	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	647	1 18	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	730	60	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	641	1 05	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	575	2 40	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	364	25	.....	.....
J. & J. W. Elsworth Co	Feb. 6, 1914	785	40	.....	.....
Erastus W. Seaman	Feb. 6, 1914	178	1 08	.....	.....
J. H. Schmeelk, No. 1	Feb. 6, 1914	45	90	18	.....
J. H. Schmeelk, No. 1	Feb. 6, 1914	49	1 00	20	.....
J. H. Schmeelk, No. 3	Feb. 6, 1914	14	1 00	.....	.....
J. H. Schmeelk, No. 3	Feb. 6, 1914	13	75	.....	.....
J. H. Schmeelk, No. 3	Feb. 6, 1913	18	1 05	.....	.....
David Jones	Feb. 6, 1914	17	95	.....	.....
Henry De Hart	Feb. 7, 1914	1	1 95	39	.....
Henry De Hart	Feb. 7, 1914	429	9 70	1 94	.....
Henry De Hart	Feb. 7, 1914	427	4 00	80	.....
Henry De Hart	Feb. 7, 1914	419	4 03	81	.....
Henry De Hart	Feb. 7, 1914	421	1 78	35	.....
Henry De Hart	Feb. 7, 1914	866	3 15	63	.....
De Hart & Housman	Feb. 7, 1914	335	33	07	.....
S. Y. Bayles	Feb. 7, 1914	105	7 25	.....	.....
S. Y. Bayles	Feb. 7, 1914	1026	17 93	.....	.....
Bayles & Bumstead	Feb. 7, 1914	Several	45 05	.....	.....
Bayles & Thorne	Feb. 7, 1914	95	15 70	.....	.....
Bayles & Thorne	Feb. 7, 1914	121	10 95	.....	.....
Bayles & Thorne	Feb. 7, 1913	321	7 15	.....	.....
Bayles & Still	Feb. 7, 1914	1000	12 50	.....	.....
Matinecock Oyster Co	Feb. 7, 1914	114	6 05	.....	.....
Matincock Oyster Co	Feb. 7, 1914	81	9 60	.....	.....
Matincock Oyster Co	Feb. 7, 1914	73	50 00	.....	.....
Geo. W. Chauncey	Feb. 7, 1914	Several	25 00	.....	.....
F. F. Downs	Feb. 7, 1914	Several	15 00	.....	.....
F. F. Downs	Feb. 7, 1914	Several	11 75	.....	.....
W. Henry Dickens	Feb. 9, 1914	61	1 95	.....	.....
W. H. Dickens	Feb. 9, 1914	213	1 25	.....	.....
Jarvis Hicks	Feb. 9, 1914	629	10	.....	.....
Jarvis Hicks	Feb. 9, 1914	630	30	.....	.....
Fred Wagner	Feb. 9, 1914	431	88	17	.....
Gustave A. Albright	Feb. 9, 1914	395	50	.....	.....
Gustave A. Albright	Feb. 9, 1913	399	35	.....	.....
Valentine Smith	Feb. 9, 1914	365	50	.....	.....
Valentine Smith	Feb.....	362	90	.....	.....
Geo. S. Smith	Feb. 9, 1913	397	20	.....	.....
Wm. Morrison	Feb. 9, 1914	551	30	06	.....
Wm. Morrison	Feb. 9, 1914	159	1 40	28	.....
Wm. Morrison	Feb. 9, 1914	345-A	85	16	.....
Bedell & Lang	Feb. 9, 1914	114	2 63	.....	.....
Lyman W. Bedell	Feb. 9, 1914	115	2 10	.....	.....
Lyman W. Bedell	Feb. 9, 1914	205	2 88	.....	.....
Lyman W. Bedell	Feb. 9, 1914	221	1 20	.....	.....
Lyman W. Bedell	Feb. 9, 1914	206	1 20	.....	.....
Lyman W. Bedell	Feb. 9, 1914	223	90	.....	.....
Lyman W. Bedell	Feb. 9, 1914	219	75	.....	.....
Lyman W. Bedell	Feb. 9, 1914	213	40	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
Lyman W. Bedell	Feb. 9, 1914	225	$0 40	.....	.....
Benjamin Merritt	Feb. 10, 1914	301	20	04	.....
Benjamin Merritt	Feb. 10, 1914	302	25	05	.....
Benjamin Merritt	Feb. 10, 1914	303	35	07	.....
Benjamin Merritt	Feb. 10, 1914	325-A	33	06	.....
Ferdinand Moeller	Feb. 10, 1914	87	50	10	.....
Ferdinand Moeller	Feb. 10, 1914	86	45	09	.....
Ferdinand Moeller	Feb. 10, 1914	72	60	12	.....
Ferdinand Moeller	Feb. 10, 1914	530	85	17	.....
Ferdinand Moeller	Feb. 10, 1914	297	50	10	.....
Ferdinand Moeller	Feb. 10, 1914	296	60	12	.....
Ferdinand Moeller	Feb. 10, 1914	6	65	13	.....
Henry Stubbs	Feb. 10, 1914	94	2 00	.....	.....
Henry Stubbs	Feb. 10, 1914	93-A	6 25	.....	.....
Stubbs & Allen	Feb. 10, 1914	93F	4 20	.....	.....
Harry C. Johnson	Feb. 10, 1914	620	40	08	.....
Harry C. Johnson	Feb. 10, 1914	439	75	15	.....
Harry C. Johnson	Feb. 10, 1914	361	50	10	.....
Harry C. Johnson	Feb. 10, 1914	431	50	10	.....
Geo. W. Doughty	Feb. 10, 1914	386	45	09	.....
Geo. W. Doughty	Feb. 10, 1914	415	1 10	22	.....
Geo. W. Doughty	Feb. 10, 1913	443	1 20	24	.....
Geo. W. Doughty	Feb. 10, 1914	383	1 25	24	.....
Geo. W. Doughty	Feb. 10, 1914	377	50	10	.....
H. L. C. Wenk	Feb. 10, 1914	567	2 40	.....	.....
H. L. C. Wenk	Feb. 10, 1914	568	2 50	.....	.....
H. L. C. Wenk	Feb. 10, 1914	569	80	.....	.....
H. Fletcher Fordham	Feb. 10, 1914	74	17 25	.....	.....
H. Fletcher Fordham	Feb. 10, 1914	73	17 25	.....	.....
J. W. C. Engelbrecht	Feb. 10, 1914	599	1 15	.....	.....
J. W. C. Englebrecht	Feb. 10, 1914	589	93	.....	.....
J. W. C. Engelbrecht	Feb. 10, 1914	591	60	.....	.....
Henderson Journeay	Feb. 10, 1914	595	38	.....	.....
Henderson Journeay	Feb. 10, 1914	597	67	.....	.....
Steinmeir & Fisher	Feb. 10, 1914	348	2 40	.....	.....
Steinmeir & Fisher	Feb. 10, 1914	342	1 25	.....	.....
Richard Biggs, Sr	Feb. 10, 1914	627	80	16	.....
Jacob Frederick	Feb. 10, 1914	566	5 55	.....	.....
David Joline	Feb. 10, 1914	9	33	.....	.....
David Joline	Feb. 10, 1914	330	90	.....	.....
David Joline	Feb. 10, 1914	292	1 23	.....	.....
A. S. Joline	Feb. 10, 1914	59	1 03	.....	.....
A. S. Joline	Feb. 10, 1914	675	1 30	.....	.....
A. S. Joline	Feb. 10, 1914	745	2 50	.....	.....
A. S. Joline	Feb. 10, 1914	58	2 85	.....	.....
A. S. Joline	Feb. 10, 1914	340	40	.....	.....
A. S. Joline	Feb. 10, 1914	342	1 58	.....	.....
A. S. Joline	Feb. 10, 1914	435	1 33	.....	.....
B. Joline Heirs	Feb. 10, 1914	290	75	.....	.....
Frank Joline	Feb. 10, 1914	300	1 03	.....	.....
S. C., D. A. & M. L. Joline	Feb. 10, 1914	857	45	.....	.....
Joline Bros	Feb. 10, 1914	60	1 20	.....	.....
Joline Bros	Feb. 10, 1914	343	1 02	.....	.....
E. P. Manee	Feb. 10, 1914	63	1 38	.....	.....
Charles Zorn	Feb. 10, 1914	308	50	.....	.....
G. J. Jennings	Feb. 10, 1914	128-A	60	.....	.....
Lillie Merrell	Feb. 10, 1914	677	50	.....	.....
Thomas S. Merrell	Feb. 10, 1914	527	1 28	.....	.....
Thomas S. Merrell	Feb. 10, 1914	525	1 03	.....	.....
Thomas S. Merrell	Feb. 10, 1914	523	23	.....	.....
Thomas S. Merrell	Feb. 10, 1914	533	1 35	.....	.....
Thomas S. Merrell	Feb. 10, 1914	535	93	.....	.....
Thomas S. Merrell	Feb. 10, 1914	844	75	.....	.....
Thomos S. Merrell	Feb. 10, 1914	693	60	.....	.....
Thomas S. Merrell	Feb. 10, 1914	222	3 70	.....	.....
Thomas S. Merrell	Feb. 10, 1914	148	1 20	.....	.....
Thomas S. Merrell	Feb. 10, 1914	529	4 03	.....	.....
John Frederick	Feb. 10, 1914	458	1 90	.....	.....
Hiram Cadmus	Feb. 10, 1914	462	1 35	.....	.....
J. E. Watts	Feb. 10, 1914	460	1 30	.....	.....
Elizabeth Watts	Feb. 10, 1914	456	1 70	.....	.....
Albert Geffken	Feb. 10, 1914	557	20	04	.....
Albert Geffken	Feb. 10, 1914	2	25	05	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
Josephine Geffken	Feb. 10, 1914	4	$0 35	$0 07	.....
Josephine Geffken	Feb. 10, 1914	5	38	09	.....
Edward Dooley	Feb. 10, 1914	459	1 65	.....	.....
F. C. Decker	Feb. 10, 1914	127	63	13	.....
F. C. Decker	Feb. 10, 1914	128	70	14	.....
F. C. Decker	Feb. 10, 1914	567	1 00	20	.....
J. E. Noe	Feb. 10, 1914	33	23	.....	.....
Elmer T. Butler	Feb. 10, 1914	713	50	.....	.....
Elmer T. Butler	Feb. 10, 1914	78	6 80	.....	.....
Elmer T. Butler	Feb. 10, 1914	31	15	.....	.....
Elmer T. Butler	Feb. 10, 1914	392	5 13	.....	.....
Elmer T. Butler	Feb. 10, 1914	553	57	.....	.....
Elmer T. Butler	Feb. 10, 1914	388	60	.....	.....
Elmer T. Butler	Feb. 10, 1914	283	55	.....	.....
Elmer T. Butler	Feb. 10, 1914	871	65	.....	.....
Elmer T. Butler	Feb. 10, 1914	839	1 05	.....	.....
D. O. Noe & Son	Feb. 10, 1914	27	35	.....	.....
D. O. Noe & Son	Feb. 10, 1914	32	17	.....	.....
D. O. Noe & Son	Feb. 10, 1914	43	75	.....	.....
D. O .Noe & Son	Feb. 10, 1914	151	17	.....	.....
D. O. Noe & Son	Feb. 10, 1914	150	18	.....	.....
D. O. Noe & Son	Feb. 10, 1914	23	20	.....	.....
D. O. Noe & Son	Feb. 10, 1914	503	2 03	.....	.....
D. O. Noe & Son	Feb. 10, 1914	805	2 40	.....	.....
D. O. Noe & Son	Feb. 10, 1914	5	1 42	.....	.....
Henry Warren	Feb. 11, 1914	544	2 35	.....	.....
Josiah Thompson	Feb. 11, 1914	91-A. & C.	4 55	.....	.....
Josiah Thompson	Feb. 11, 1914	122	1 10	.....	.....
Josiah Thompson	Feb. 11, 1914	123	35	.....	.....
Josiah Thompson	Feb. 11, 1914	323	1 30	.....	.....
August G. Miller	Feb. 11, 1914	327	53	11	.....
Abram Latourette	Feb. 11, 1914	433	3 25	.....	.....
Nelson Jacklin	Feb. 11, 1914	774	35	.....	.....
Nelson Jacklin	Feb. 11, 1914	790	25	.....	.....
Nelson Jacklin	Feb. 11, 1914	556	50	.....	.....
Nelson Jacklin	Feb. 11, 1914	546	98	.....	.....
Nelson Jacklin	Feb. 11, 1914	828	50	.....	.....
Nelson Jacklin	Feb. 11, 1914	192	25	.....	.....
W. D. Bush	Feb. 11, 1914	11	63	.....	.....
W. D. Bush	Feb. 11, 1914	457	92	.....	.....
B. F. & H. E. Bush	Feb. 11, 1914	481	11 75	.....	.....
B. F. & H. E. Bush	Feb. 11, 1914	456	40	.....	.....
B. F. & H. E. Bush	Feb. 11, 1914	468	1 33	.....	.....
B. F. & H. E. Bush	Feb. 11, 1914	467	1 04	.....	.....
B. F. & H. E. Bush	Feb. 11, 1914	861	6 30	.....	.....
W. B. Dooley	Feb. 11, 1914	457	50	.....	.....
W. B. Dooley	Feb. 11, 1914	462	1 00	.....	.....
Wm. P. Burbank	Feb. 11, 1914	50	98	19	.....
Elbert H. Mackey	Feb. 11, 1914	93	6 75	.....	.....
Elbert H. Mackey	Feb. 11, 1914	90	8 50	.....	.....
John H. Price	Feb. 11, 1914	196	27	.....	.....
John H. Price	Feb. 11, 1914	198	50	.....	.....
Elizabeth Denice	Feb. 13, 1914	258	1 35	27	.....
Elizabeth Denice	Feb. 13, 1914	259	90	18	.....
C. V. Decker	Feb. 13, 1914	50	30	06	.....
C. V. Decker	Feb. 13, 1914	444	1 58	32	.....
C. V. Decker	Feb. 13, 1914	851	1 95	39	.....
C. V. Decker	Feb. 13, 1914	853	1 80	36	.....
C. V. Decker	Feb. 13, 1914	870	90	18	.....
C. V. Decker	Feb. 13, 1914	876	9 60	1 92	.....
Geo. Rhinehart	Feb. 13, 1914	432	2 30	.....	.....
J. G. H. Bedell	Feb. 13, 1914	455	1 35	27	.....
Amberman & Bedell	Feb. 13, 1914	505	1 55	31	.....
Geo. Newbury	Feb. 13, 1914	635	30	06	.....
John D. Bush	Feb. 13, 1914	95	30	.....	.....
Wm. Oelrichs	Feb. 13, 1914	67	95	.....	.....
Wm. Oelrichs	Feb. 13, 1914	65	50	.....	.....
Wm. Oelrichs	Feb. 13, 1914	302	2 55	.....	.....
Annie Oelrichs	Feb. 13, 1914	66	1 30	.....	.....
Henry Schlatenberg	Feb. 13, 1914	238	1 00	20	.....
H. W. Rohde	Feb. 13, 1914	75	1 00	20	.....
H. W. Rohde	Feb. 13, 1914	74	80	16	.....
H. W. Rohde	Feb. 13, 1914	230	1 45	29	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
Geo. A. Schmeelk	Feb. 16, 1914	210	$2 70	$0 54	.....
Geo. A. Schmeelk	Feb. 16, 1914	281	55	11	.....
Geo. A. Schmeelk	Feb. 16, 1914	103	55	11	.....
Herman M. Schmeelk	Feb. 16, 1914	411	7 45	.....	.....
Herman M. Schmeelk	Feb. 16, 1914	412	3 45	.....	.....
Herman M. Schmeelk	Feb. 16, 1914	468	1 35	.....	.....
Herman M. Schmeelk	Feb. 16, 1914	509	20 20	.....	.....
Herman M. Schmeelk	Feb. 16, 1914	541	6 70	.....	.....
Timothy T. Mott	Feb. 16, 1914	7	30	06	.....
H. E. Mackey	Feb. 16, 1914	93-L	3 53	.....	.....
Wm. M. Schmeelk	Feb. 16, 1914	15	80	16	.....
Wm. M. Schmeelk	Feb. 16, 1914	316	2 20	44	.....
Geo. Dickens	Feb. 16, 1914	43	80	.....	.....
Cornell & Palmer	Feb. 16, 1914	369	3 00	.....	.....
Chas. E. Palmer & Son	Feb. 16, 1914	Several	62 50	.....	.....
Chas. E. Palmer & Son	Feb. 16, 1914	Several	14 50	.....	.....
Chas. E. Palmer & Son	Feb. 16, 1914	671	1 23	.....	.....
C. E., C. F. & H. Palmer	Feb. 16, 1914	859	16 20	.....	.....
Elmer I. Palmer	Feb. 16, 1914	973	8 00	.....	.....
Elmer I. Palmer	Feb. 16, 1914	953	1 15	.....	.....
Elmer I. Palmer	Feb. 16, 1914	897	8 22	.....	.....
Elmer I. Palmer	Feb. 16, 1914	896	3 75	.....	.....
Elmer I. Palmer	Feb. 16, 1914	Section D	15 63	.....	.....
Androvette & Thompson	Feb. 16, 1914	392	2 75	.....	.....
Androvette & Thompson	Feb. 16, 1914	148	90	.....	.....
Androvette & Thompson	Feb. 16, 1914	339	2 07	.....	.....
Androvette & Thompson	Feb. 16, 1914	337	1 00	.....	.....
Androvette & Thompson	Feb. 16, 1914	568	53	.....	.....
Androvette & Thompson	Feb. 16, 1914	236	7 98	.....	.....
Androvette & Thompson	Feb. 16, 1914	789	2 55	.....	.....
Androvette & Thompson	Feb. 16, 1914	807	65	.....	.....
Androvette & Thompson	Feb. 16, 1914	570	65	.....	.....
Androvette & Thompson	Feb. 16, 1914	980	5 80	.....	.....
Androvette & Thompson	Feb. 16, 1914	979	5 00	.....	.....
Androvette & Thompson	Feb. 16, 1914	900	2 25	.....	.....
E. Otis Hovey	Feb. 16, 1914	600	10 70	.....	.....
E. Otis Hovey	Feb. 16, 1914	587	2 75	.....	.....
E. Otis Hovey	Feb. 16, 1914	617	1 40	.....	.....
E. Otis Hovey	Feb. 16, 1914	198	10 40	.....	.....
E. Otis Hovey	Feb. 16, 1914	327	75	.....	.....
E. Otis Hovey	Feb. 16, 1914	301	3 70	.....	.....
E. Otis Hovey	Feb. 16, 1914	618	4 25	.....	.....
Wm. C. Baldwin	Feb. 16, 1914	199	1 35	27	.....
A. W. Sharrett	Feb. 16, 1914	488	1 12	.....	.....
A. W. Sharrett	Feb. 16, 1914	506	2 24	.....	.....
A. W. Sharrett	Feb. 16, 1914	687	90	.....	.....
A. W. Sharrett	Feb. 16, 1914	656	3 30	.....	.....
Geo. A. Carman	Feb. 16, 1914	118	85	17	.....
Geo. A. Carman	Feb. 16, 1914	218	1 05	21	.....
W. H. Dickens	Feb. 16, 1914	250	70	14	.....
J. E. La Forge	Feb. 16, 1914	358	75	15	.....
J. E. La Forge	Feb. 16, 1914	366	53	11	.....
Jacob Bumstead	Feb. 16, 1914	66	4 50	90	.....
John M. Sleight	Feb. 17, 1914	129	28	.....	.....
John M. Sleight	Feb. 17, 1914	125	2 97	.....	.....
L. G. Griffing	Feb. 17, 1914	13	20 90	.....	.....
D. B. Colon	Feb. 17, 1914	418½	43	.....	.....
D. B. Colon	Feb. 17, 1914	950	1 20	.....	.....
W. R. Schenck	Feb. 17, 1914	501	6 45	.....	.....
Peter Wm. Von Ahnen	Feb. 17, 1914	500	60	.....	.....
Peter Wm. Von Ahnen	Feb. 17, 1914	204	25	.....	.....
Peter Wm. Von Ahnen	Feb. 17, 1914	32	2 65	.....	.....
Peter Wm. Von Ahnen	Feb. 17, 1914	205	2 05	.....	.....
Peter Wm. Von Ahnen	Feb. 17, 1914	41	1 60	.....	.....
Peter Wm. Von Ahnen	Feb. 17, 1914	304	2 85	.....	.....
The Modern Oyster Co.	Feb. 18, 1914	Several	21 50	4 30	.....
A. L. Fields	Feb. 18, 1914	70	2 95	58	.....
A. L. Fields	Feb. 18, 1914	30	1 10	22	.....
Henry Cornell	Feb. 18, 1914	409	1 10	22	.....
Warren Cornell	Feb. 18, 1914	453	2 15	.....	.....
Warren Cornell	Feb. 18, 1914	449	50	.....	.....
Warren Cornell	Feb. 18, 1914	372	1 25	.....	.....
John C. Allen	Feb. 18, 1914	123	1 45	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
John C. Allen	Feb. 18, 1914	90	$1 45	.....	.....
James H. McCrodden	Feb. 19, 1914	22	1 00	.....	.....
Clara McCrodden	Feb. 19, 1914	23	65	.....	.....
Abram Manee	Feb. 19, 1914	806	85	$0 16	.....
Abram Manee	Feb. 19, 1914	814	1 65	32	.....
Abram Manee	Feb. 19, 1914	816	75	14	.....
Abram Manee	Feb. 19, 1914	819	1 10	22	.....
Abram Manee	Feb. 19, 1914	832	28	05	.....
Abram & Wm. Manee	Feb. 19, 1914	461	50	10	.....
Abram & Wm. Manee	Feb. 19, 1914	808	1 10	22	.....
Abram & Wm. Manee	Feb. 19, 1914	815	1 20	24	.....
Abram & Wm. Manee	Feb. 19, 1914	817	50	10	.....
Jesse V. Golden	Feb. 19, 1914	17	55	11	.....
Daniel Rowland	Feb. 19, 1914	143	1 00	.....	.....
Daniel Rowland	Feg. 19, 1914	346	85	.....	.....
Daniel Rowland	Feb. 19, 1914	345	1 40	.....	.....
Daniel Rowland	Feb. 19, 1914	503	90	.....	.....
Charles B. Sprague	Feb. 20, 1914	749	48	09	.....
Charles B. Sprague	Feb. 20, 1914	753	35	07	.....
Geo. E. Sprague	Feb. 20, 1914	751	25	05	.....
Daniel Burbank	Feb. 20, 1914	288	3 85	77	.....
Daniel Burbank	Feb. 20, 1914	380	3 00	60	.....
Daniel Burbank	Feb. 20, 1914	386	1 33	27	.....
Daniel Burbank	Feb. 20, 1914	696	4 97	99	.....
Daniel Burbank	Feb. 20, 1914	862	6 15	1 23	.....
Daniel Burbank	Feb. 20, 1914	382	4 20	84	.....
Daniel Burbank	Feb. 20, 1914	890	4 95	99	.....
Victor White	Feb. 20, 1914	162	1 10	22	.....
Wm. P. Housman	Feb. 20, 1914	42	30	.....	.....
Wm. P. Housman	Feb. 20, 1914	24	45	.....	.....
Annie Von Ahnen	Feb. 20, 1914	40	1 20	24	.....
E. E. Abrams	Feb. 20, 1914	29	65	13	.....
E. E. Abrams	Feb. 20, 1914	28	65	13	.....
Herbert Androvette	Feb. 20, 1914	178	60	12	.....
J. H. & J. H. (Jr.) Vreeland	Feb. 21, 1914	522	1 25	.....	.....
J. H. & J. H. (Jr.) Vreeland	Feb. 21, 1914	607	2 50	.....	.....
J. H. & J. H. (Jr.) Vreeland	Feb. 21, 1914	185	3 00	.....	.....
J. H. & J. H. (Jr.) Vreeland	Feb. 21, 1914	633	1 45	.....	.....
Haviland & Odell	Feb. 21, 1914	384	1 88	.....	.....
Haviland & Odell	Feb. 21, 1914	3-6-7	1 88	.....	.....
Haviland & Odell	Feb .21, 1914	8	63	.....	.....
Haviland & Odell	Feb. 21, 1914	15	63	.....	.....
Haviland & Odell	Feb. 21, 1914	368	1 15	.....	.....
Haviland & Odell	Feb. 21, 1914	465	90	.....	.....
Edward Weber	Feb. 24, 1914	183	80	16	.....
Edward Weber	Feb. 24, 1914	44	50	10	.....
Edward Weber	Feb. 24, 1914	10	1 10	22	.....
Edward Weber	Feb. 24, 1914	47	1 45	28	.....
Christian Hoobs	Feb. 24, 1914	619	90	.....	.....
Frank Rogers	Feb. 24, 1914	36	27 60	.....	.....
Frank Rogers	Feb. 24, 1914	37	24 50	.....	.....
Frank Rogers	Feb. 24, 1914	35	34 75	.....	.....
Frank Rogers	Feb. 24, 1914	103	7 45	.....	.....
F. K. Conant	Feb. 24, 1914	Several	1 88	38	.....
F. K. Conant	Feb. 24, 1914	Several	1 25	25	.....
Henry S. Marshall	Feb. 24, 1914	653	1 97	.....	.....
Henry S. Marshall	Feb. 24, 1914	761	75	.....	.....
Henry S. Marshall	Feb. 24, 1914	764	75	.....	.....
Henry S. Marshall	Feb. 24, 1914	1,016	55	.....	.....
Julia Sofield	Feb. 24, 1914	140	6 75	.....	.....
Julia Sofield	Feb. 24, 1914	170	1 10	.....	.....
C. S. Sofield	Feb. 24, 1914	34	17	.....	.....
C. S. Sofield	Feb. 24, 1914	28	15	.....	.....
C. S. Sofield	Feb. 24, 1914	522	6 40	.....	.....
C. S. Sofield	Feb. 24, 1914	536	35	.....	.....
C. S. Sofield	Feb. 24, 1914	556	3 80	.....	.....
C. S. Sofield	Feb. 24, 1914	526	5 00	.....	.....
C. S. Sofield	Feb. 24, 1914	523	35	.....	.....
C. S. Sofield	Feb. 24, 1914	110	1 30	.....	.....
C. S. Sofield	Feb. 24, 1914	171	60	.....	.....
C. S. Sofield	Feb. 24, 1914	469	3 00	.....	.....
Ella Sofield	Feb. 24, 1914	190	5 65	.....	.....
Sofield & Frazer	Feb. 24, 1914	154	40	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
Sofield & Frazer	Feb. 24, 1914	156	$0 20	.....	.....
Sofield & Frazer	Feb. 24, 1914	169	80	.....	.....
Sofield & Frazer	Feb. 24, 1914	168	80	.....	.....
Sofield & Frazer	Feb. 24, 1914	995	26 10	.....	.....
Alex. C. Frazer	Feb. 24, 1914	21	18	.....	.....
Alex. C. Frazer	Feb. 24, 1914	939	13	.....	.....
Alex. C. Frazer	Feb. 24, 1914	1,012	46 28	.....	.....
Frazer & Houghwout	Feb. 24, 1914	176	3 70	.....	.....
Frazer & Houghwout	Feb. 24, 1914	218	1 75	.....	.....
Frazer & Houghwout	Feb. 24, 1914	783	10 00	.....	.....
Frazer & Houghwout	Feb. 24, 1914	504	2 38	.....	.....
Frazer & Houghwout	Feb. 24, 1914	1,007	2 50	.....	.....
Frazer & Houghwout	Feb. 24, 1914	1,010	7 50	.....	.....
Alex. Frazer Co	Feb. 24, 1914	994	20 65	.....	.....
Alex. Frazer Co	Feb. 24, 1914	1,005	7 50	.....	.....
Alex. Frazer Co	Feb. 24, 1914	1,011	38 03	.....	.....
G. P. Wright & Son	Feb. 24, 1914	491	38	.....	.....
W. H. Houghwout	Feb. 24, 1914	486	1 55	.....	.....
W. H. Houghwout	Feb. 24, 1914	512	63	.....	.....
W. H. Houghwout	Feb. 24, 1914	694	10 55	.....	.....
W. H. Houghwout	Feb. 24, 1914	899	1 05	.....	.....
W. H. Houghwout	Feb. 24, 1914	978	1 25	.....	.....
Wm. C. Porth	Feb. 24, 1914	329	3 63	.....	.....
Wm. C. Porth	Feb. 24, 1914	323	3 45	.....	.....
Wm. C. Porth	Feb. 24, 1914	325	2 00	.....	.....
Wm. C. Porth	Feb. 24, 1914	319	1 25	.....	.....
Wm. C. Porth	Feb. 24, 1914	333	37	.....	.....
Wm. C. Porth	Feb. 24, 1914	843	1 15	.....	.....
Wm. C. Porth	Feb. 24, 1914	321	80	.....	.....
Wm. C. Porth	Feb. 24, 1914	331	1 30	.....	.....
Wm. C. Porth	Feb. 24, 1914	327	1 25	.....	.....
Wm. C. Porth	Feb. 24, 1914	412	63	.....	.....
Wm. C. Porth	Feb. 24, 1914	779	6 60	.....	.....
Wm. C. Porth	Feb. 24, 1914	408	1 25	.....	.....
Wm. C. Porth	Feb. 24, 1914	781	10 70	.....	.....
John I. Merrell	Feb. 24, 1914	460	60	.....	.....
John I. Merrell	Feb. 24, 1914	474	1 13	.....	.....
John I. Merrell	Feb. 24, 1914	475	1 88	.....	.....
John I. Merrell	Feb. 24, 1914	476	1 28	.....	.....
John I. Merrell	Feb. 24, 1914	352	1 08	.....	.....
John I. Merrell	Feb. 24, 1914	232	3 00	.....	.....
John I. Merrell	Feb. 24, 1914	477	3 13	.....	.....
John I. Merrell	Feb. 24, 1914	478	3 30	.....	.....
John I. Merrell	Feb. 24, 1914	446	13	.....	.....
John I. Merrell	Feb. 24, 1914	833	1 30	.....	.....
John I. Merrell	Feb. 24, 1914	524	2 15	.....	.....
John I. Merrell	Feb. 24, 1914	258	3 45	.....	.....
John I. Merrell	Feb. 24, 1914	504	2 37	.....	.....
John I. Merrell	Feb. 24, 1914	1,004	5 35	.....	.....
John I. Merrell	Feb. 24, 1914	1,014	3 63	.....	.....
John I. Merrell	Feb. 24, 1914	6	1 13	.....	.....
John I. Merrell	Feb. 24, 1914	919	3 60	.....	.....
Pausch Bros. Co	Feb. 25, 1914	12	53 30	.....	.....
Pausch Bros. Co	Feb. 25, 1914	13	17 10	.....	.....
Pausch Bros. Co	Feb. 25, 1914	Several	16 75	.....	.....
Pausch Bros. Co	Feb. 25, 1914	Several	37 50	.....	.....
Pausch Bros. Co	Feb. 25, 1914	Several	15 63	.....	.....
Pausch Bros. Co	Feb. 25, 1914	Several	24 55	.....	.....
Pausch Bros. Co	Feb. 25, 1914	108	29 15	.....	.....
Pausch Bros. Co	Feb. 25, 1914	107	6 25	.....	.....
Pausch Bros. Co	Feb. 25, 1914	127	4 40	.....	.....
Pausch Bros. Co	Feb. 25, 1914	315	8 90	.....	.....
Pausch Bros. Co	Feb. 25, 1914	977	36 00	.....	.....
Pausch Bros. Co	Feb. 25, 1914	1,019	11 58	.....	.....
Pausch Bros. Co	Feb. 25, 1914	1,018	18 87	.....	.....
Pausch Bros. Co	Feb. 25, 1914	1,020	22 95	.....	.....
Forrester & Hoag	Feb. 25, 1914	347	1 48	.....	.....
Forrester & Hoag	Feb. 25, 1914	353	45	.....	.....
Forrester & Hoag	Feb. 25, 1914	989	2 55	.....	.....
Forrester & Hoag	Feb. 25, 1914	801	90	.....	.....
Forrester & Hoag	Feb. 25, 1914	669	64	.....	.....
Forrester & Hoag	Feb. 25, 1914	874	35	.....	.....
Forrester & Hoag	Feb. 25, 1914	875	90	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
John S. Hoag	Feb. 25, 1914	875	$0 20	.....	.....
Geo. E. Forrester	Feb. 25, 1914	361	40	.....	.....
Geo. E. Forrester	Feb. 25, 1914	359	1 05	.....	.....
Geo. E. Forrester	Feb. 25, 1914	515	30	.....	.....
Geo. E. Forrester	Feb. 25, 1914	517	65	.....	.....
C. O. Sprague	Feb. 25, 1914	355	63	$0 13	.....
C. O. Sprague	Feb. 25, 1914	286	43	09	.....
John O. Carlson	Feb. 25, 1914	605	2 20	44	.....
Charles E. Denton	Feb. 25, 1914	153	55	.....	.....
Charles E. Denton	Feb. 25, 1914	152	80	.....	.....
Carl Peers	Feb. 25, 1914	308	1 90	38	.....
Carl Peers	Feb. 25, 1914	133	95	19	.....
Carl Peers	Feb. 25, 1914	215	70	14	.....
Elsworth B. Lewis	Feb. 25, 1914	191	13	.....	.....
Elsworth B. Lewis	Feb. 25, 1914	175	38	.....	.....
Elsworth B. Lewis	Feb. 25, 1914	189	30	.....	.....
Elsworth B. Lewis	Feb. 25, 1914	177	40	.....	.....
Elsworth B. Lewis	Feb. 25, 1914	181	1 25	.....	.....
Elsworth B. Lewis	Feb. 25, 1914	682	20	.....	.....
Geo. H. Sharrett	Feb. 26, 1914	496	1 55	.....	.....
Bertha Sharrett	Feb. 26, 1914	148	1 05	.....	.....
Abram Woglam	Feb. 26, 1914	769	42	08	.....
Abram Woglam	Feb. 26, 1914	777	47	09	.....
Geo. T. Woglam	Feb. 26, 1914	20	92	18	.....
T. F. & S. De Hart	Feb. 26, 1914	17	23	.....	.....
T. F. & S. De Hart	Feb. 26, 1914	10	25	.....	.....
T. F. & S. De Hart	Feb. 26, 1914	14	38	.....	.....
T. F. & S. De Hart	Feb. 26, 1914	149	2 00	.....	.....
T. F. & S. De Hart	Feb. 26, 1914	145	3 65	.....	.....
Radel Oyster Co	Feb. 26, 1914	5	42 80	.....	.....
Radel Oyster Co	Feb. 26, 1914	7	58 80	.....	.....
Radel Oyster Co	Feb. 26, 1914	4	25 33	.....	.....
Radel Oyster Co	Feb. 26, 1914	6	36 60	.....	.....
Standard Oyster Co	Feb. 26, 1914	186	1 28	.....	.....
Standard Oyster Co	Feb. 26, 1914	226	4 50	.....	.....
Standard Oyster Co	Feb. 26, 1914	240	80	.....	.....
Standard Oyster Co	Feb. 26, 1914	654	2 05	.....	.....
Standard Oyster Co	Feb. 26, 1914	216	3 15	.....	.....
Standard Oyster Co	Feb. 26, 1914	172	2 33	.....	.....
Standard Oyster Co	Feb. 26, 1914	256	6 32	.....	.....
Standard Oyster Co	Feb. 26, 1914	73	95	.....	.....
Standard Oyster Co	Feb. 26, 1914	53	1 70	.....	.....
Standard Oyster Co	Feb. 26, 1914	483	60	.....	.....
Standard Oyster Co	Feb. 26, 1914	492	1 48	.....	.....
Standard Oyster Co	Feb. 26, 1914	499	1 45	.....	.....
Standard Oyster Co	Feb. 26, 1914	74	1 65	.....	.....
Standard Oyster Co	Feb. 26, 1914	41	13	.....	.....
Standard Oyster Co	Feb. 26, 1914	40	10	.....	.....
Standard Oyster Co	Feb. 26, 1914	856	1 45	.....	.....
Standard Oyster Co	Feb. 26, 1914	174	4 60	.....	.....
Standard Oyster Co	Feb. 26, 1914	147	9 40	.....	.....
Standard Oyster Co	Feb. 26, 1914	492	2 45	.....	.....
Standard Oyster Co	Feb. 26, 1914	676	41 75	.....	.....
Standard Oyster Co	Feb. 26, 1914	Section B	62 50	.....	.....
Standard Oyster Co	Feb. 26, 1914	252	5 00	.....	.....
Standard Oyster Co	Feb. 26, 1914	479	2 15	.....	.....
Standard Oyster Co	Feb. 26, 1914	860	2 80	.....	.....
Standard Oyster Co	Feb. 26, 1914	238	7 35	.....	.....
Standard Oyster Co	Feb. 26, 1914	902	1 25	.....	.....
Standard Oyster Co	Feb. 26, 1914	903	1 58	.....	.....
Standard Oyster Co	Feb. 26, 1914	904	1 05	.....	.....
Standard Oyster Co	Feb. 26, 1914	905	1 08	.....	.....
Wm. H. Lockwood	Feb. 26, 1914	925	95	.....	.....
Wm. H. Lockwood	Feb. 26, 1914	945	9 85	.....	.....
Wm. H. Lockwood	Feb. 26, 1914	920	1 80	.....	.....
Wm. H. Lockwood	Feb. 26, 1914	944	9 00	.....	.....
Wm. H. Lockwood	Feb. 26, 1914	927	38 80	.....	.....
Wm. H. Lockwood	Feb. 26, 1914	3	43 38	.....	.....
Andrew Radel	Feb. 26, 1914	75	26 15	.....	.....
Andrew Radel	Feb. 26, 1914	76	26 05	.....	.....
Andrew Radel	Feb. 26, 1914	77	26 00	.....	.....
Andrew Radel	Feb. 26, 1914	78	26 00	.....	.....
Andrew Radel	Feb. 26, 1914	99	26 00	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
Andrew Radel	Feb. 26, 1914	98	$26 00	.....	.....
John M. Benner	Feb. 26, 1914	8	18 83	.....	.....
John M. Benner	Feb. 26, 1914	50	2 20	.....	.....
John M. Benner	Feb. 26, 1914	46	2 20	.....	.....
John M. Benner	Feb. 26, 1914	45	2 20	.....	.....
John M. Benner	Feb. 26, 1914	44	2 20	.....	.....
John M. Benner	Feb. 26, 1914	47	2 20	.....	.....
John M. Benner	Feb. 26, 1914	51	2 20	.....	.....
John M. Benner	Feb. 26, 1914	49	2 20	.....	.....
John M. Benner	Feb. 26, 1914	43	2 20	.....	.....
John M. Benner	Feb. 26, 1914	48	2 20	.....	.....
John M. Benner	Feb. 26, 1914	42	2 20	.....	.....
John M. Benner	Feb. 26, 1914	2	16 80	.....	.....
John M. Benner	Feb. 26, 1914	67	3 07	.....	.....
John M. Benner	Feb. 26, 1914	68	7 05	.....	.....
John M. Benner	Feb. 26, 1914	55	3 50	.....	.....
John M. Benner	Feb. 26, 1914	238	3 75	.....	.....
John M. Benner	Feb. 26, 1914	112	7 60	.....	.....
John M. Benner	Feb. 26, 1914	115	23 85	.....	.....
John M. Benner	Feb. 26, 1914	119	4 40	.....	.....
John M. Benner	Feb. 26, 1914	116	16 35	.....	.....
John M. Benner	Feb. 26, 1914	111	13 50	.....	.....
John M. Benner	Feb. 26, 1914	110	6 45	.....	.....
John M. Benner	Feb. 26, 1914	125	54 05	.....	.....
John M. Benner	Feb. 26, 1914	124	29 55	.....	.....
John M. Benner	Feb. 26, 1914	113	60 60	.....	.....
John M. Benner	Feb. 26, 1914	Several	41 10	.....	.....
John M. Benner	Feb. 26, 1914	Several	45 00	.....	.....
John M. Benner	Feb. 26, 1914	83	19 25	.....	.....
John M. Benner	Feb. 26, 1914	69	2 35	.....	.....
John M. Benner	Feb. 26, 1914	72	30 55	.....	.....
John M. Benner	Feb. 26, 1914	Several	105 00	.....	.....
John M. Benner	Feb. 26, 1914	Several	37 50	.....	.....
John M. Benner	Feb. 26, 1914	Several	85 65	.....	.....
John M. Benner	Feb. 26, 1914	996	23 25	.....	.....
John M. Benner	Feb. 26, 1914	1,015	55 00	.....	.....
John M. Benner	Feb. 26, 1914	1,013	25 40	.....	.....
John M. Benner	Feb. 26, 1914	998	25 00	.....	.....
John M. Benner	Feb. 26, 1914	988	37 50	.....	.....
John M. Benner	Feb. 26, 1914	991	37 50	.....	.....
Chas. V. Leviness	Feb. 26, 1914	238	90	.....	.....
Chas. V. Leviness	Feb. 26, 1914	230	50	.....	.....
C. M. Decker	Feb. 26, 1914	734	38	.....	.....
C. C. & C. M. Decker	Feb. 26, 1914	25	23	.....	.....
C. C. & C. M. Decker	Feb. 26, 1914	666	35	.....	.....
C. C. & C. M. Decker	Feb. 26, 1914	670	1 18	.....	.....
Lucius C. Jones	Feb. 27, 1914	104	6 30	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	85	12 80	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	87	15 15	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	86	27 30	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	Several	4 05	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	Several	22 23	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	Several	7 50	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	Several	7 50	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	Several	10 00	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	Several	10 00	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	16	5 25	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	480	1 15	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	984	37 50	.....	.....
N. S. Ackerly & Son Co	Feb. 27, 1914	985	25 00	.....	.....
Benj. W. Carll	Feb. 27, 1914	Several	22 50	.....	.....
Benj. W. Carll	Feb. 27, 1914	Several	30 00	.....	.....
N. S. Ackerly	Feb. 27, 1914	14	43 05	.....	.....
N. S. Ackerly	Feb. 27, 1914	Several	15 00	.....	.....
S. Le Roy Ackerly	Feb. 27, 1914	Section C	11 70	.....	.....
S. Le Roy Ackerly	Feb. 27, 1914	Several	32 50	.....	.....
H. Davis Ackerly	Feb. 27, 1914	16	14 00	.....	.....
H. Davis Ackerly	Feb. 27, 1914	17	48 40	.....	.....
Jos. M. Belford	Feb. 27, 1914	Several	17 50	.....	.....
Jos. M. Belford	Feb. 27, 1914	Several	15 00	.....	.....
Jos. M. Belford	Feb. 27, 1914	Several	30 00	.....	.....
John M. Vanderveer	Feb. 27, 1914	Several	27 50	.....	.....
John M. Vanderveer	Feb. 27, 1914	Several	30 00	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
Jos. Kerrigan	Feb. 27, 1914	15	$49 45	.....	.....
Christian Walle	Feb. 27, 1914	279	55	.....	.....
Christian Walle	Feb. 27, 1914	394	55	.....	.....
Christian Walle	Feb. 27, 1914	679	1 18	.....	.....
Christian Walle	Feb. 27, 1914	626	38	.....	.....
Christian Walle	Feb. 27, 1914	396	28	.....	.....
Christian Walle	Feb. 27, 1914	1,001	1 05	.....	.....
La Forge & Thompson	Feb. 27, 1914	422½	73	$0 15	.....
Wesley Thompson	Feb. 27, 1914	126	1 45	29	.....
Wesley Thompson	Feb. 27, 1914	42	93	18	.....
Wesley Thompson	Feb. 27, 1914	640	52	10	.....
Wesley Thompson	Feb. 27, 1914	776	1 15	23	.....
David Johnson	Feb. 27, 1914	167	50	.....	.....
David Johnson	Feb. 27, 1914	262	45	.....	.....
David Johnson	Feb. 27, 1914	606	55	.....	.....
David Johnson	Feb. 27, 1914	608	65	.....	.....
N. Y. Fishing Club	Feb. 28, 1914	67	1 33	27	.....
W. Elsworth Sprague	Feb. 28, 1914	405	2 30	46	.....
W. Elsworth Sprague	Feb. 28, 1914	406	1 80	36	.....
W. Elsworth Sprague	Feb. 28, 1914	470	8 30	1 66	.....
Wofield & Mesereau	Feb. 28, 1914	100	50	.....	.....
Wofield & Mesereau	Feb. 28, 1914	582	90	.....	.....
Wofield & Mesereau	Feb. 28, 1914	101	70	.....	.....
Wofield & Mesereau	Feb. 28, 1914	195	50	.....	.....
Wofield & Mesereau	Feb. 28, 1914	285	70	.....	.....
Wofield & Mesereau	Feb. 28, 1914	102	35	.....	.....
Theodore Johnson	Feb. 28, 1914	731	23	.....	.....
Theodore Johnson	Feb. 28, 1914	35	20	.....	.....
Theodore Johnson	Feb. 28, 1914	426	18	.....	.....
Theodore Johnson	Feb. 28, 1914	38	13	.....	.....
Theodore Johnson	Feb. 28, 1914	39	15	.....	.....
John D. Merrell	Feb. 28, 1914	869	45	.....	.....
Jones & Burbank	Mar. 3, 1914	502	3 60	.....	.....
Jones & Burbank	Mar. 3, 1914	500	10 00	.....	.....
Jones & Burbank	Mar. 3, 1914	510	83	.....	.....
Jones & Burbank	Mar. 3, 1914	685	4 90	.....	.....
Geo. S. Burbank	Mar. 3, 1914	858	3 00	.....	.....
Mills & Ronik	Mar. 4, 1914	Several	16 25	.....	.....
Wm. J. Mills	Mar. 4, 1914	314	5 00	.....	.....
Wm. J. Mills	Mar. 4, 1914	Several	15 00	.....	.....
Wm. J. Mills	Mar. 4, 1914	4	25	.....	.....
Wm. J. Mills	Mar. 4, 1914	321	10 00	.....	.....
Wm. J. Mills	Mar. 4, 1914	Several	73 50	.....	.....
Wm. J. Mills	Mar. 4, 1914	8	15	.....	.....
Loundes, Mills & Ockers	Mar. 4, 1914	15	25	.....	.....
Loundes & Mills	Mar. 4, 1914	93	6 10	.....	.....
Loundes & Mills	Mar. 4, 1914	106	10 15	.....	.....
Loundes & Mills	Mar. 4, 1914	79	29 90	.....	.....
Loundes, Mills & Thorne	Mar. 4, 1914	16	2 65	.....	.....
Loundes, Mills & Thorne	Mar. 4, 1914	2	1 00	.....	.....
Loundes, Mills & Thorne	Mar. 4, 1914	1	1 10	.....	.....
Loundes, Mills & Thorne	Mar. 4, 1914	18	5 55	.....	.....
Greenport Oyster Co.	Mar. 4, 1914	Several	15 00	3 00	.....
Azel F. Merrell	Mar. 4, 1914	430	85	.....	.....
Azel F. Merrell	Mar. 4, 1914	278	1 23	.....	.....
Azel F. Merrell	Mar. 4, 1914	428	1 48	.....	.....
Azel F. Merrell	Mar. 4, 1914	159	3 08	.....	.....
Azel F. Merrell	Mar. 4, 1914	494	1 28	.....	.....
Azel F. Merrell	Mar. 4, 1914	118	1 30	.....	.....
Azel F. Merrell	Mar. 4, 1914	434	33	.....	.....
Azel F. Merrell	Mar. 4, 1914	266	75	.....	.....
Azel F. Merrell	Mar. 4, 1914	485	2 55	.....	.....
Azel F. Merrell	Mar. 4, 1914	437	73	.....	.....
Azel F. Merrell	Mar. 4, 1914	508	1 50	.....	.....
Azel F. Merrell	Mar. 4, 1914	3	1 28	.....	.....
Azel F. Merrell	Mar. 4, 1914	160	2 78	.....	.....
Azel F. Merrell	Mar. 4, 1914	195	2 13	.....	.....
Azel F. Merrell	Mar. 4, 1914	161	1 70	.....	.....
Azel F. Merrell	Mar. 4, 1914	193	2 98	.....	.....
Azel F. Merrell	Mar. 4, 1914	282	2 38	.....	.....
Azel F. Merrell	Mar. 4, 1914	270	2 20	.....	.....
Azel F. Merrell	Mar. 4, 1914	280	1 00	.....	.....
Azel F. Merrell	Mar. 4, 1914	276	5 70	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
Azel F. Merrell	Mar. 4, 1914	674	$0 70	.....	.....
Azel F. Merrell	Mar. 4, 1914	162	4 38	.....	.....
Azel F. Merrell	Mar. 4, 1914	484	85	.....	.....
Azel F. Merrell	Mar. 4, 1914	743	15	.....	.....
Azel F. Merrell	Mar. 4, 1914	168	1 65	.....	.....
Azel F. Merrell	Mar. 4, 1914	170	1 50	.....	.....
Azel F. Merrell	Mar. 4, 1914	863	4 70	.....	.....
Azel F. Merrell	Mar. 4, 1914	864	6 35	.....	.....
Azel F. Merrell	Mar. 4, 1914	877	1 55	.....	.....
Azel F. Merrell	Mar. 4, 1914	126	8 40	.....	.....
Azel F. Merrell	Mar. 4, 1914	312	39 85	.....	.....
Azel F. Merrell	Mar. 4, 1914	313	31 50	.....	.....
Azel F. Merrell	Mar. 4, 1914	974	25	.....	.....
Azel F. Merrell	Mar. 4, 1914	20	1 35	.....	.....
Azel F. Merrell	Mar. 4, 1914	19	70	.....	.....
Azel F. Merrell	Mar. 4, 1914	3	95	.....	.....
Azel F. Merrell	Mar. 4, 1914	9	2 35	.....	.....
Azel F. Merrell	Mar. 4, 1914	146	1 05	.....	.....
Azel F. Merrell	Mar. 4, 1914	200	1 80	.....	.....
Azel F. Merrell	Mar. 4, 1914	391	50	.....	.....
Azel F. Merrell	Mar. 4, 1914	392	40	.....	.....
Azel F. Merrell	Mar. 4, 1914	535	1 05	.....	.....
Azel F. Merrell	Mar. 4, 1914	488	1 70	.....	.....
Azel F. Merrell	Mar. 4, 1914	316	14 25	.....	.....
Azel F. Merrell	Mar. 4, 1914	982	11 45	.....	.....
Azel F. Merrell	Mar. 4, 1914	1,017	18 43	.....	.....
Azel F. Merrell	Mar. 4, 1914	993	22 35	.....	.....
Merrell & Bayles	Mar. 4, 1914	3	1 40	.....	.....
Merrell & Bayles	Mar. 4, 1914	5	4 75	.....	.....
Merrell & Burbank	Mar. 4, 1914	933	11 10	.....	.....
Merrell & Burbank	Mar. 4, 1914	928	6 25	.....	.....
Roscoe Bishop	Mar. 5, 1914	9	9 67	$1 93	.....
R. C. Du Boise	Mar. 6, 1914	71	1 55	.....	.....
Alfred Du Boise	Mar. 6, 1914	72	73	.....	.....
Alfred Du Boise	Mar. 6, 1914	415	58	.....	.....
J. & B. K. Simonson	Mar. 11, 1914	51	35	.....	.....
J. & B. K. Simsonson	Mar. 11, 1914	49	45	.....	.....
Wm. Joline	Mar. 12, 1914	70	2 63	.....	.....
Sterling Oyster Co	Mar. 18, 1914	Several	52 50	.....	.....
Sterling Oyster Co	Mar. 18, 1914	Several	8 55	.....	.....
Almer Decker	Mar. 25, 1914	18	13	03	.....
Almer Decker	Mar. 25, 1914	52	20	04	.....
Almer Decker	Mar. 25, 1914	724	80	16	.....
Almer Decker	Mar. 25, 1914	725	95	19	.....
J. & B. K. Simonson	Mar. 25, 1914	51	35	.....	.....
J. & B. K. Simonson	Mar. 25, 1914	49	45	.....	.....
Geo. H. Valentine	Mar. 26, 1914	981	2 85	57	.....
Bell, Fordham & Bell	Mar. 26, 1914	89	3 20	64	*.....
Bell, Fordham & Bell	Mar. 26, 1914	89	3 20	64	†.....
Floyd Abrams	Mar. 28, 1914	398	30	.....	.....
Abram Martineau	Mar. 30, 1914	8	30	.....	.....
Abram Martineau	Mar. 30, 1914	385	1 05	.....	.....
Abram Martineau	Mar. 30, 1914	228	2 25	.....	.....
Abram Martineau	Mar. 30, 1914	377	1 00	.....	.....
Abram Martineau	Mar. 30, 1914	506	2 24	.....	.....
Abram Martineau	Mar. 30, 1914	230	5 70	.....	.....
Abram Martineau	Mar. 30, 1914	865	2 75	.....	.....
Weber & Degenhardt	Mar. 31, 1914	317	5 50	1 10	.....
Thomas L. Jobes	Mar. 31, 1914	579	35	.....	.....
Thomas L. Jobes	Mar. 31, 1914	573	30	.....	.....
Thomas L. Jobes	Mar. 31, 1914	581	2 53	.....	.....
Thomas L. Jobes	Mar. 31, 1914	548	88	.....	.....
Thomas L. Jobes	Mar. 31, 1914	550	1 33	.....	.....
Thomas L. Jobes	Mar. 31, 1914	840	40	.....	.....
R. C. Du Boise	April 1, 1914	71	.....	31	.....
John Marshall	April 1, 1914	649	95	19	.....
John Marshall	April 1, 1914	651	90	18	.....
John Marshall	April 1, 1914	661	47	09	.....
John Marshall	April 1, 1914	671	1 24	24	.....
John Marshall	April 1, 1914	744	1 00	20	.....
John Marshall	April 1, 1914	746	30	06	.....
John Marshall	April 1, 1914	750	70	14	.....
Mesereau & Lewis	April 3, 1914	669	63	12	.....

*Tax (1912). †Tax (1913).

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
W. John McGrory	April 4, 1914	285	$10 30	.....	.....
Geo. H. Mott	April 13, 1914	403	10	.....	.....
Geo. H. Mott	April 13, 1914	408	2 20	.....	.....
Geo. H. Mott	April 13, 1914	424	60	.....	.....
Geo. H. Mott	April 13, 1914	430	5 40	.....	.....
Geo. H. Mott	April 13, 1914	507	85	.....	.....
Chas. Cowens	April 14, 1914	Section D	3 95	.....	$0 05
Lewis Bros	April 14, 1914	299	5 15	.....	.....
Lewis Bros	April 14, 1914	300	21 05	.....	.....
Wm. M. Remsen	April 14, 1914	472	7 40	$1 48	.....
Thomas Hassett, Jr	April 14, 1914	999	50 60	.....	.....
Thomas Hassett, Jr	April 14, 1914	1023	12 60	.....	.....
F. C. & H. A. Glasier	April 14, 1914	246	55	.....	.....
F. C. & H. A. Glasier	April 14, 1914	237	4 15	.....	10
E. M. Gunn	April 14, 1914	96	1 30	.....	.....
Henry Borwegen	April 14, 1914	310	4 25	.....	.....
Henry Borwegen	April 14, 1914	50	40	.....	.....
Henry Borwegen	April 14, 1914	48	70	.....	.....
W. A. Wynant	April 14, 1914	266	1 60	.....	.....
R. W. La Forge	April 14, 1914	212	38	07	.....
R. W. La Forge	April 14, 1914	143	25	05	.....
R. W. La Forge	April 14, 1914	961	25	05	.....
W. W. La Forge	April 14, 1914	142	88	17	.....
W. W. La Forge	April 14, 1914	123	85	16	.....
W. W. La Forge	April 14, 1914	592	40	08	.....
W. W. La Forge	April 14, 1914	596	97	19	.....
W. W. La Forge	April 14, 1914	594	37	07	.....
W. W. La Forge	April 14, 1914	872	20	04	.....
R. W. & W. W. La Forge	April 14, 1914	281	1 40	28	.....
Charles L. Pearsall	April 14, 1914	414	95	19	.....
Charles L. Pearsall	April 14, 1914	421	3 90	78	.....
W. D. Ruddock	April 15, 1914	239	1 50	30	.....
Jacob Brady	April 16, 1914	249	6 90	.....	.....
A. H. Haack	April 16, 1914	108	1 05	.....	.....
A. H. Haack	April 16, 1914	7	55	.....	.....
A. H. Haack	April 16, 1914	12½	45	.....	.....
A. W. Androvette	April 17, 1914	449	60	12	.....
S. D. Abrams, Jr	April 17, 1914	435	75	15	.....
S. D. Abrams, Jr	April 17, 1914	384	65	13	.....
John H. Tilley	April 17, 1914	326	7 60	1 52	.....
Henry W. Davis	April 18, 1914	343	2 65	53	*69
Henry W. Davis	April 18, 1914	506	1 40	28	*.....
Henry W. Davis	April 18, 1914	329	1 85	37	*.....
Fred. Lundy	April 18, 1914	252	2 60	52	†24
J. H. Schmeelk, No. 2	April 18, 1914	11	90	18	.....
J. H. Schmeelk, No. 2	April 18, 1914	21	95	19	.....
J. H. Schmeelk, No. 2	April 18, 1914	632	20	04	.....
Theodore Sprague	April 20, 1914	429	1 80	36	.....
Theodore Sprague	April 20, 1914	396	35	07	.....
Webb Sprague	April 20, 1914	425	75	15	.....
Webb Sprague	April 20, 1914	422	70	14	.....
Webb Sprague	April 20, 1914	426	75	15	.....
Stephen Collins	April 20, 1914	255	1 60	.....	15
Stephen Collins	April 20, 1914	234	1 80	.....	.....
Stephen Collins	April 20, 1914	265	50	.....	.....
W. H. Watts	April 23, 1914	445	70	14	.....
Fred J. Lancaster	April 23, 1914	584	90	18	.....
Charles Weber	April 24, 1914	105	7 25	1 45	.....
Charles Weber	April 24, 1914	10	15	03	.....
Charles Weber	April 24, 1914	14	40	08	.....
R. R. Mott	April 24, 1914	6	35	07	.....
Wynant Huffmire	April 24, 1914	355	1 80	36	.....
Wynant Huffmire	April 24, 1914	495	75	15	.....
Wynant Huffmire	April 24, 1914	562	1 40	28	.....
H. W. Schmeelk Oyster Co	April 24, 1914	624	50	.....	.....
H. W. Schmeelk Oyster Co	April 24, 1914	130	60	.....	.....
Wansor & Whaley	April 27, 1914	84	4 55	90	.....
Alfred Jones	April 27, 1914	92	6 25	1 24	.....
Henry Van Name	April 27, 1914	56	1 40	.....	.....
Mrs. Charles Zeigler	April 27, 1914	414½	54	.....	.....
Mrs. Charles Zeigler	April 27, 1914	416	58	.....	.....
Mrs. Charles Zeigler	April 27, 1914	422	73	.....	.....
Thomas F. Colon	April 27, 1914	448	23	.....	.....

* Tax (1912). † Tax (1911).

TAXES, PENALTY AND INTEREST COLLECTED — (*Continued*)

NAME	Date	Lot	Tax	Penalty	Interest
David W. Van Name	April 27, 1914	55	$1 30	$0 26	.....
David W. Van Name	April 27, 1914	597	32	06	.....
Suwassett Oyster Co	April 28, 1914	101	41 85	.....	.....
Suwassett Oyster Co	April 28, 1914	100	26 00	.....	.....
Suwassett Oyster Co	April 28, 1914	102	50 00	.....	.....
Suwassett Oyster Co	April 28, 1914	72	24 80	.....	.....
James A. Cochrane	April 28, 1914	986	18 75	.....	.....
Charles Gateson	April 29, 1914	597	3 40	.....	.....
A. C. Sofield	April 29, 1914	46	17	03	.....
A. C. Sofield	April 29, 1914	24	20	04	.....
Willett E. Raynor	April 30, 1914	561	2 00	40	.....
Willett E. Raynor	April 30, 1914	260	70	14	.....
Willett E. Raynor	April 30, 1914	257	1 20	24	.....
Willett E. Raynor	April 30, 1914	261	50	10	$0 45
William Cooley	April 30, 1914	277	1 33	27	.....
F. T. Boerum	April 30, 1914	27	63	13	.....
Alfred Cannon	April 30, 1914	454	20	04	.....
Grace L. Ryder	April 30, 1914	119	20	04	.....
Benjamin Ryder	April 30, 1914	97	45	09	.....
Benjamin Ryder	April 30, 1914	93	45	09	.....
Benjamin Ryder	April 30, 1914	126	15	03	.....
Daniel Green	April 30, 1914	798	15	03	.....
Daniel Green	April 30, 1914	800	65	13	.....
J. A. Bailey	May 1, 1914	603	8 30	1 66	19
C. B. Price	May 2, 1914	710	50	.....	.....
C. B. Price	May 2, 1914	711	13	.....	.....
C. B. Price	May 2, 1914	738	75	.....	.....
C. B. Price	May 2, 1914	48	85	.....	.....
J. J. Ferry	May 4, 1914	277	4 00	80	.....
J. J. Ferry	May 4, 1914	278	1 00	20	.....
J. J. Ferry	May 4, 1914	279	4 85	97	.....
J. J. Ferry	May 4, 1914	280	90	18	.....
J. J. Ferry	May 4, 1914	281	1 30	26	.....
O. & M. G. Bartow	May 5, 1914	10-L	4 38	14	.....
Sherman Decker	May 5, 1914	116	39	.....	.....
Sherman Decker	May 5, 1914	22	13	.....	.....
Sherman Decker	May 5, 1914	465	1 28	.....	.....
Sherman Decker	May 5, 1914	466	1 00	.....	.....
Sherman Decker	May 5, 1914	668	1 10	.....	.....
Sherman Decker	May 5, 1914	681	83	.....	.....
Sherman Decker	May 5, 1914	687	1 50	.....	.....
Sherman Decker	May 5, 1914	778	88	.....	.....
Sherman Decker	May 5, 1914	780	2 53	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	573	2 75	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	581	1 40	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	580	2 85	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	577	95	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	273	2 20	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	225	1 30	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	232	1 00	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	276	75	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	485	5 80	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	36	1 35	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	37	75	.....	.....
H. W. Schmeelk Oyster Co	May 5, 1914	398	1 20	.....	.....
H. W. Schmeelk Oyster Co	May 5, 1914	99	40	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	62	1 30	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	35	2 00	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	337	1 65	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	76	45	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	147	3 15	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	192	30	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	107	1 20	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	351	2 00	.....	.....
H. W. Schmeelk Oyster Co	May 7, 1914	191	40	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	532	3 50	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	106	35	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	38	85	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	109	1 65	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	308	1 60	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	209	10	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	142	1 25	.....	.....

TAXES, PENALTY AND INTEREST COLLECTED — (*Concluded*)

NAME	Date	Lot	Tax	Penalty	Interest
H. W. Schmeelk Oyster Co	May 6, 1914	328	$1 35	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	193	80	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	172	6 80	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	176	95	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	174	1 25	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	486	70	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	78	1 10	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	141	1 50	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	148	80	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	493	70	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	633	3 30	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	145	1 30	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	489	3 15	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	58	60	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	220	1 05	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	226	45	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	335	1 65	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	623	1 25	.....	.....
H. W. Schmeelk Oyster Co	May 6, 1914	59	1 50	.....	$1 10
Mattituck Oyster Co	May 6, 1914	Several	70 00	.....	.....
Mattituck Oyster Co	May 6, 1914	Several	30 00	.....	.....
Mattituck Oyster Co	May 6, 1914	Several	15 00	.....	.....
Mattituck Oyster Co	May 6, 1914	Several	4 35	.....	.....
Mattituck Oyster Co	May 6, 1914	Several	11 25	.....	.....
Mattituck Oyster Co	May 6, 1914	Several	8 75	.....	.....
E. M. Post	May 23, 1914	526	1 00	$0 20	.....
E. M. Post	May 23, 1914	520	1 63	32	.....
E. M. Post	May 23, 1914	516	1 87	37	.....
E. M. Post	May 23, 1914	514	78	15	.....
John Journeay	June 1, 1914	88	63	13	01
M. H. Sickman	June 4, 1914	599	1 80	36	*
M. H. Sickman	June 4, 1914	599	1 80	36	†72
Samuel E. Smith	June 4, 1914	440	65	05	13
J. F. & S. E. Smith	June 4, 1914	385	75	15	10
Thomas Pearsall	June 4, 1914	549	65	13	.....
Thomas Pearsall	June 4, 1914	621	80	16	.....
Thomas Pearsall	June 4, 1914	419	85	16	.....
Thomas Pearsall	June 4, 1914	448	45	09	.....
Thomas Pearsall	June 4, 1914	423	1 15	23	36
Fred Denz	June 5, 1914	320	2 15	.....	10
Geo. H. Mance	June 8, 1914	542	33	07	02
James A. Cochrane	June 8, 1914	997	27 10	.....	.....
James A. Cochrane	June 8, 1914	992	12 50	.....	.....
Geo. Rhinehart	June 8, 1914	432	.....	46	.....
John Wittaker	June 10, 1914	231	1 10	22	.....
Wm. J. Campbell	June 10, 1914	510	1 55	31	.....
Mary E. Behncke	June 10, 1914	167	1 45	.....	.....
Henry W. Behncke	June 10, 1914	31	65	.....	.....
John H. Abrams	June 10, 1914	294	95	19	.....
John H. Abrams	June 10, 1914	295	35	07	.....
Christian Hoobs	June 10, 1914	619	90	.....	.....
J. Frank Smith	June 11, 1914	441	25	05	02
Glenwood Oyster Co	June 16, 1914	Several	60 00	.....	.....
Glenwood Oyster Co	June 16, 1914	120	3 95	.....	.....
Glenwood Oyster Co	June 16, 1914	109	7 35	.....	.....
Glenwood Oyster Co	June 16, 1914	80	39 85	.....	.....
Glenwood Oyster Co	June 16, 1914	609	3 15	.....	.....
Rudolph Merrell	June 16, 1914	311	27 00	.....	.....
Elmer Price	June 22, 1914	260	75	15	.....
Elmer Price	June 22, 1914	250	38	07	.....
Elmer Price	June 22, 1914	244	20	04	.....
Elmer Price	June 22, 1914	712	35	07	05
Purity Blue Point Oyster Co	July 8, 1914	Several	60 00	12 00	.....
Henry Von Twistern	July 14, 1914	555	30	06	.....
Henry Von Twistern	July 14, 1914	12	60	12	06
M. T. Merrell	Sept. 3, 1914	395	1 30	26	.....
M. T. Merrell	Sept. 3, 1914	397	1 20	24	24
Totals	.....	.....	$7,670 04	$123 40	$11 57

* Tax (1911). † Tax (1912).

LOBSTER LICENSES ISSUED DURING FISCAL YEAR, OCTOBER 1, 1913, TO SEPTEMBER 30, 1914

Date		NAME	Address	No.	Amount
Jan.	26	F. D. Buddington	Noank, Conn	1	$20 00
Feb.	16	Joseph Perry	Groton, Conn	2	15 00
	18	Anton De Costa	Groton, Conn	3	15 00
Mar.	9	W. H. Smith	Stonington, Conn	4	15 00
	9	Edgar A. Main	Noank, Conn	5	20 00
	10	W. B. Chapman	Groton, Conn	6	15 00
	10	John F. Mather, Jr	Groton, Conn	7	15 00
	10	John H. Chapman	Groton, Conn	8	20 00
	16	Frank Smith	Noank, Conn	9	15 00
	16	John Smith	Noank, Conn	10	15 00
	20	Charles R. Hill	Groton, Conn	11	20 00
	28	Manual Perry	Stonington, Conn	12	20 00
	31	George Denison	Mystic, Conn	13	20 00
April	3	Ralph C. Clifford	Mystic, Conn	14	15 00
	6	Manual Lewis	Stonington, Conn	15	20 00
	10	Ira Latham	Stonington, Conn	16	20 00
	10	Allen Ashby	Noank, Conn	17	20 00
	10	Manuel Huldricks	Stonington, Conn	18	15 00
	10	Anton Huldricks	Stonington, Conn	19	15 00
	10	Roswell Lamb	Noank, Conn	20	15 00
	18	Edgar C. Buddington	Groton, Conn	21	20 00
	18	William L. Palmer	Noank, Conn	22	20 00
	18	Anton Bawa	Stonington, Conn	23	20 00
	21	Joseph Sistare	Noank, Conn	24	20 00
	23	Louis B. Waterman	New London, Conn	25	20 00
	23	Judson R. Perkins	Groton, Conn	26	20 00
	25	S. B. Wilcox	Noank, Conn	27	20 00
	25	A. E. Noyes	Mystic, Conn	28	20 00
	27	E. D. Woodmansee	Noank, Conn	29	15 00
	29	A. V. Morgan	Noank, Conn	30	20 00
	30	L. E. Peterson	Noank, Conn	31	15 00
May	4	Joseph Paul	Stonington, Conn	32	15 00
	6	F. W. Morgan	Noank, Conn	33	20 00
	7	Manuel Pont	Stonington, Conn	34	15 00
	9	Frank C. Joseph	Stonington, Conn	35	20 00
	9	O. W. Beebee	Noank, Conn	36	20 00
	9	Wm. R. Carpenter	Noank, Conn	37	20 00
	11	J. P. Ebbetts	Noank, Conn	38	20 00
	13	E. F. Davis	Noank, Conn	39	20 00
	13	Wm. F. Holliday	Mystic, Conn	40	20 00
	13	Manuel Joseph	Stonington, Conn	41	15 00
	13	John Lamb	Noank, Conn	42	15 00
	13	Joseph Eccelston	Mystic, Conn	43	20 00
	18	Joe Bell	New London, Conn	44	15 00
	25	S. C. Fowler	Noank, Conn	45	15 00
	25	Frank Bragga	Stonington, Conn	46	15 00
	26	Wm. P. Latham	Noank, Conn	47	20 00
June	2	S. M. Coles	Noank, Conn	48	20 00
	2	W. H. Wilcox	Noank, Conn	49	15 00
	3	Geo. S. Main	Noank, Conn	50	15 00
	4	F. N. Ashby	Noank, Conn	51	35 00
	10	Manuel Perry	New London, Conn	52	20 00
	15	Eugene Bogue	Mystic, Conn	53	20 00
	15	Frank E. Perry	New London, Conn	54	20 00
	16	John Daball	Noank, Conn	55	20 00
	16	Wm. Edgar	Stonington, Conn	56	15 00
	17	M. Pont	Stonington, Conn	57	20 00
	18	F. D. Ward	Noank, Conn	58	20 00
	19	Ira and Chas. Edwards	Waterford, Conn	59	20 00
	19	Chas. Edwards	Waterford, Conn	60	35 00
	19	Chas. H. Mitchell	West Mystic, Conn	61	20 00
	25	Joe Pascheo	Stonington, Conn	62	20 00
	26	John Henry	Stonington, Conn	63	20 00
	27	Herman Fisher	Noank, Conn	64	15 00
	27	Manuel Maderi	Stonington, Conn	65	20 00
	27	Cornelius Fowler	Noank, Conn	66	15 00
	30	W. H. Corbin	New Britain, Conn	67	15 00
July	3	Joseph Silva	New London, Conn	68	15 00
	3	R. B. Palmer	Noank, Conn	69	15 00
	3	James MacGregor	Mystic, Conn	70	20 00
	20	C. J. Christensen	Noank, Conn	71	20 00

LOBSTER LICENSES ISSUED DURING FISCAL YEAR — *Concluded*

Date	NAME	Address	No.	Amount
July 29	Harry Boesen	Noank, Conn	72	$15 00
30	Chas. Lewis	West Mystic, Conn	73	15 00
31	Chas. Beebee	New London, Conn	74	15 00
	Total			$1,345 00

FISHING LICENSES ISSUED DURING FISCAL YEAR, OCTOBER 1, 1913, TO SEPTEMBER 30, 1914

Date	NAME	Address	No.	Kind	Amount
Oct. 15	Emanuel Perry	Stonington, Conn	51	Food fish	$5 00
Jan. 31	B. W. Latham	New London, Conn	1	Food fish	5 00
Mar. 9	Edgar A. Main	Noank, Conn	2	Food fish	5 00
10	Earl C. Foster	Noank, Conn	3	Food fish	5 00
20	Charles R. Hill	Groton, Conn	4	Food fish	5 00
28	Chas. F. Noyes	Mystic, Conn	5	Food fish	5 00
28	Frank W. Fitch	Noank, Conn	6	Food fish	5 00
April 6	Manuel Lewis	Stonington, Conn	7	Food fish	5 00
16	Geo. W. Wilcox	Mystic, Conn	8	Food fish	5 00
May 12	Amadee Poirier	Montauk, L. I.	9	Food fish	5 00
12	Chas. H. Joyce	Montauk, L. I.	10	Food fish	5 00
12	Wilfred Pitts	Montauk, L. I.	11	Food fish	5 00
12	Chas. Perry	Montauk, L. I.	12	Food fish	5 00
12	Benjamin Pitts	Montauk, L. I.	13	Food fish	5 00
12	Albert A. Martell	Montauk, L. I.	14	Food fish	5 00
13	John A. Eckerson	Closter, N. J.	15	Food fish	5 00
29	Elias Pitts	Greenport, L. I.	16	Food fish	5 00
29	Products Mfg. Co	New York city	17	Menhaden	50 00
29	Products Mfg. Co	New York city	18	Menhaden	50 00
29	A. E. Noyes	Mystic, Conn	19	Food fish	5 00
June 13	O. W. Hendrickson	Noank, Conn	20	Food fish	5 00
15	Eliza D. Clark	Stonington, Conn	21	Food fish	5 00
24	Atlantic Phosphate & Oil Corp.	New York city	22	Menhaden	25 00
24	Atlantic Phosphate & Oil Corp.	New York city	23	Menhaden	50 00
24	Atlantic Phosphate & Oil Corp.	New York city	24	Menhaden	50 00
24	Atlantic Phosphate & Oil Corp.	New York city	25	Menhaden	50 00
24	Atlantic Phosphate & Oil Corp.	New York city	26	Menhaden	50 00
24	Atlantic Phosphate & Oil Corp.	New York city	27	Menhaden	50 00
24	Atlantic Phosphate & Oil Corp.	New York city	28	Menhaden	50 00
24	Atlantic Phosphate & Oil Corp.	New York city	29	Menhaden	50 00
24	Atlantic Phosphate & Oil Corp.	New York city	30	Menhaden	50 00
24	Atlantic Phosphate & Oil Corp.	New York city	31	Menhaden	50 00
24	Atlantic Phosphate & Oil Corp.	New York city	32	Menhaden	50 00
29	Paul Pitts	Greenport, L. I.	33	Food fish	5 00
29	H. F. Loveland	Saybrook, Conn	34	Food fish	5 00
29	T. A. Buckridge	Essex, Conn	35	Food fish	5 00
29	Fred Ostman	Stonington, Conn	36	Food fish	5 00
29	Sterling Fullerton	Elsworth, Conn	37	Food fish	5 00
30	Chas. Knudsen	Montauk, L. I.	38	Food fish	5 00
July 3	Peter Pelipas	Montauk, L. I.	39	Food fish	5 00
7	Gus Peterson	Fort Pond, N. Y.	40	Food fish	5 00
7	Swan & Finch Co	New York city	41	Menhaden	50 00
7	Swan & Finch Co	New York city	42	Menhaden	50 00
7	Swan & Finch Co	New York city	43	Menhaden	50 00
8	James Miller	Seabright, N. J.	44	Food fish	5 00
11	Manuel Clay	Stonington, Conn	45	Food fish	5 00
13	John J. Hines	Perth Amboy, N. J.	46	Food fish	5 00
13	John J. Hines	Perth Amboy, N. J.	47	Menhaden	25 00
16	Joe K. Silva	Mystic, Conn	48	Food fish	5 00
27	John Ostman	Stonington, Conn	49	Food fish	5 00
Aug. 13	F. N. Ashby	Noank, Conn	50	Food fish	5 00
	Total				$980 00

CERTIFIED COPIES OF LEASES, OCTOBER 1, 1913, TO SEPTEMBER 30, 1914

Name	Date	Amount
Russell S. Wolfe	June 4, 1914	$30 00
N. S. Ackerly	June 18, 1914	3 00
Total		$33 00

RECORDING FEES, OCTOBER 1, 1913, TO SEPTEMBER 30, 1914

Name	Date	Amount
S. Y. Bayles	Oct. 9, 1913	$0 25
New York Oyster Co	Oct. 21, 1913	25
New York Oyster Co	Oct. 23, 1913	3 00
Wm. J. Mills	Oct. 24, 1913	1 00
New York Oyster Co	Nov. 7, 1913	1 00
Thomas Hassett, Jr	Nov. 7, 1913	1 00
New York Oyster Co	Nov. 7, 1913	5 00
New York Oyster Co	Nov. 22, 1913	75
David Johnson	Nov. 24, 1913	1 00
Eugene D. McCarthy	Dec. 1, 1913	25
Eugene D. McCarthy	Dec. 3, 1913	25
John C. Allen	Dec. 9, 1913	1 00
New York Oyster Co	Dec. 12, 1913	50
Geo. M. Still, Inc	Dec. 12, 1913	25
Pausch Bros. Oyster Co	Dec. 12, 1913	2 00
E. H. Mackey	Dec. 15, 1913	1 00
S. Y. Bayles	Dec. 18, 1913	1 00
John M. Benner	Dec. 19, 1913	3 00
Clarence DeHart	Dec. 20, 1913	25
New York Oyster Co	Dec. 27, 1913	4 00
New York Oyster Co	Jan. 23, 1914	1 00
Frederick Denz	Jan. 24, 1914	1 00
Greenport Oyster Co	Feb. 9, 1914	1 00
New York Oyster Co	Feb. 13, 1914	2 00
Geo. M. Still, Inc	Feb. 25, 1914	1 00
Clarence DeHart	Feb. 26, 1914	2 00
New York Oyster Co	Mar. 24, 1914	4 00
Edwin H. Lewis	Mar. 24, 1914	25
Geo. H. Valentine	Mar. 26, 1914	1 00
Bell, Fordham & Bell	Mar. 26, 1914	1 00
John M. Benner	Mar. 28, 1914	2 00
Lewis Bros	Mar. 28, 1914	1 00
Chas. Schopp	Mar. 30, 1914	1 50
New York Oyster Co	April 10, 1914	50
William Ruddock	April 15, 1914	1 00
New York Oyster Co	April 20, 1914	25
E. D. McCarthy	April 20, 1914	1 00
Wynant Huffmire	April 24, 1914	2 00
Rebecca Huffmire	April 24, 1914	5 00
Pausch Bros. Oyster Co	April 20, 1914	1 25
Croel B. Price	May 2, 1914	2 00
Eugene D. McCarthy	May 8, 1914	1 00
Geo. H. Lewis	May 12, 1914	1 00
New York Oyster Co	May 21, 1914	1 00
F. W. Lewis	June 12, 1914	2 00
Wm. C. Porth	June 13, 1914	2 00

RECORDING FEES — (*Continued*)

Name	Date	Lease No.	Amount
Azel F. Merrell	June 16, 1914		$1 00
Rudolph Merrell	June 16, 1914		1 00
Edwin H. Lewis	June 16, 1914		1 00
F. F. Downs	June 27, 1914		1 00
James A. Cochrane	July 13, 1914		2 00
Mills, Loundes, et al	July 20, 1914		15 00
Mills, Loundes, et al	July 27, 1914		4 00
S. Y. Bayles	July 28, 1914		25
New York Oyster Co	July 29, 1914		75
Fred Ronik	Aug. 1, 1914		25
E. Otis Hovey	Aug. 10, 1914		2 00
S. Y. Bayles	Aug. 10, 1914		11 00
Mills, Loundes, et al	Aug. 13, 1914		1 00
S. Y. Bayles	Aug. 13, 1914		25
Sealshipt Oyster System	Aug. 17, 1914		55 00
New York Oyster Co	Aug. 28, 1914		1 00
New York Oyster Co	Sept. 4, 1914		25
Pausch Bros. Oyster Co	Sept. 8, 1914		25
Clarence DeHart	Sept. 9, 1914		25
Jesse G. Wynant	Sept. 14, 1914		1 00
Total			$163 75

MISCELLANEOUS

Name	Date	Service	Amount
Thomas Hassett, Jr	Dec. 11, 1913	Re-location survey	$7 35
Mansfield & Sons	Jan. 23, 1914	Blue print	1 00
Stevens Oyster Co	Jan. 24, 1914	Blue print	1 00
New York Oyster Co	Jan. 24, 1914	Blue print	8 00
Sealshipt Oyster System	Mar. 5, 1914	Blue print	1 00
Theodore Kopf	Mar. 10, 1914	Blue print	50
Theodore Kopf	Mar. 17, 1914	Blue print	1 00
Lancraft Bros., Inc	Mar. 19, 1914	Blue print	2 00
Nicholas Klippel	Mar. 24, 1914	Blue print	1 00
James A. Cochrane	April 18, 1914	Blue print	1 00
Henry C. Rowe	April 18, 1914	Blue print	1 00
New York Oyster Co	April 22, 1914	Blue print	1 00
Wm. C. Porth	April 22, 1914	Blue print	2 00
Radel Oyster Co	April 23, 1914	Blue print	6 00
Wm. C. Porth	April 22, 1914	Re-location survey	10 10
E. P. Bushnell	May 13, 1914	Blue print	1 00
Alex. Frazer Co	June 17, 1914	Blue print	2 00
Lewis Bros	Sept. 8, 1914	Blue print	1 00
Andrew Radel Oyster Co	Sept. 23, 1914	Blue print	1 00
Total			$48 95

LEASES EXECUTED AND NUMBER OF ACRES LEASED FROM OCTOBER 1, 1913, TO OCTOBER 1, 1914

Lease No.	Lot No.	Location	Acres	Name
1468	12	Hudson river	3.7	New York Oyster Co.
1469	13	Hudson river	46.6	New York Oyster Co.
1470	7	Hudson river	2.4	New York Oyster Co.
1471	9	Hudson river	2.7	New York Oyster Co.
1472	1024	Raritan bay	4.3	New York Oyster Co.
1473	Several	Long Island sound	60.0	Greenport Oyster Co.
1474	1023	Raritan bay	50.4	Thomas Hassett, Jr.
1475	E-1	East river	63.3	New York Oyster Co.
1476	1026	Raritan bay	71.7	S. Y. Bayles.
1477	201	Raritan bay	10.6	New York Oyster Co.
1478	1027	Raritan bay	81.2	New York Oyster Co.
1479	1025	Raritan bay	124.6	New York Oyster Co.
1480	836	Raritan bay	4.3	New York Oyster Co.
1481	1028	Raritan bay	466.0	New York Oyster Co.
1482	989B–990B	Raritan bay	100.0	Geo. M. Still, Inc.
1483	989A	Raritan bay	150.0	Clarence DeHart.
1484	990A	Raritan bay	50.0	Clarence DeHart.
1485	928–928A	Raritan bay	72.7	New York Oyster Co.
1486	1029	Raritan bay	30.4	New York Oyster Co.
1487	163	Raritan bay	12.8	New York Oyster Co.
1488	664	Raritan bay	1.2	New York Oyster Co.
1489	1030	Raritan bay	207.5	New York Oyster Co.
1491	1031	Lower New York bay	1,163.7	Eugene D. McCarthy.
1492	328	Long Island sound	26.2	Edwin H. Lewis.
1493	14	Hudson river	545.0	New York Oyster Co.
1494	1033	Raritan bay	1.1	Charles Schopp.
1495	1032	Raritan bay	1.2	Charles Schopp.
1496	16	Hudson river	55.9	New York Oyster Co.
1497	17	Hudson river	165.5	New York Oyster Co.
1498	18	Hudson river	36.2	New York Oyster Co.
1499	15	Hudson river	169.4	New York Oyster Co.
		Total	3,780.6	

STATEMENT OF OYSTER GROUNDS HELD UNDER LEASE OR FRANCHISE

	Acres	Tax
Schedule "A"	13,437.00	$3,359 48
Schedule "B"	2,296.60	574 16
Schedule "C"	15,912.05	3,978 70
Total	31,645.65	$7,912 34

SCHEDULE "A"

NAME	Lot No.	Location	Acres	Lease granted	Lease expires	Rate of rental	Annual rental	Annual tax
N. S. Ackerly & Son Co	984	Raritan bay	150.0	Jan. 11, 1911	Jan. 11, 1926	$2 00	$300 00	$37 50
N. S. Ackerly & Son Co	985	Raritan bay	100.0	July 29, 1911	July 29, 1926	2 00	200 00	25 00
Androvette & Thompson	980	Raritan bay	23.2	Sept. 21, 1910	Sept. 21, 1925	2 00	46 40	5 80
Androvette & Thompson	979	Raritan bay	20.0	Sept. 21, 1910	Sept. 21, 1925	2 00	40 00	5 00
Androvette & Thompson	900	Raritan bay	9.0	Mar. 10, 1909	Mar. 10, 1934	2 00	18 00	2 25
John C. Allen	90	Long Island sound	5.8	April 10, 1900	April 10, 1915	25	1 45	1 45
John C. Allen	123	Long Island sound	5.8	June 14, 1904	June 14, 1919	25	1 45	1 45
Daniel Burbank	890	Raritan bay	19.8	Jan. 9, 1909	Jan. 9, 1923	2 00	39 60	4 95
John M. Bell	269	East Chester bay	9.6	April 10, 1906	April 10, 1921	25	2 40	2 40
John M. Bell	268	Long Island sound	6.8	Nov. 12, 1901	Nov. 12, 1916	25	1 70	1 70
John T. Bird	Sec. B–91	Long Island sound	24.6	April 10, 1900	April 10, 1950	25	6 15	6 15
Bayles & Thorn	95	Long Island sound	62.8	April 23, 1900	April 23, 1950	25	15 70	15 70
Bayles & Thorn	Sec. C & F–121	Long Island sound	43.8	June 14, 1904	June 14, 1919	25	10 95	10 95
Bayles & Thorn	321	Long Island sound	28.6	Dec. 1, 1910	Dec. 1, 1925	2 00	57 20	7 15
Bayles & Bumstead	Several	Long Island sound	180.2	Aug. 13, 1901	Aug. 13, 1916	25	45 05	45 05
John M. Benner	112	Long Island sound	30.4	July 8, 1902	July 8, 1917	25	7 60	7 60
John M. Benner	115	Long Island sound	95.4	July 8, 1902	July 8, 1917	25	23 85	23 85
John M. Benner	119	Long Island sound	17.6	July 8, 1902	July 8, 1917	25	4 40	4 40
John M. Benner	116	Long Island sound	65.4	Feb. 11, 1902	Feb. 11, 1917	25	16 35	16 35
John M. Benner	111	Long Island sound	54.0	Jan. 14, 1902	Jan. 14, 1917	25	13 50	13 50
John M. Benner	110	Long Island sound	25.8	July 8, 1902	July 8, 1917	25	6 45	6 45
John M. Benner	125	Long Island sound	216.2	May 9, 1905	May 9, 1920	25	54 05	54 05
John M. Benner	124	Long Island sound	118.2	Sept. 8, 1903	Sept. 8, 1918	25	29 55	29 55
John M. Benner	113	Long Island sound	242.4	Nov. 12, 1901	Nov. 12, 1916	25	60 60	60 60
John M. Benner	Several	Long Island sound	164.4	Dec. 12, 1905	Dec. 12, 1920	25	41 10	41 10
John M. Benner	Several	Long Island sound	180.0	Dec. 12, 1905	Dec. 12, 1920	25	45 00	45 00
John M. Benner	83	Long Island sound	77.0	April 10, 1906	April 10, 1921	25	19 25	19 25
John M. Benner	69	Long Island sound	9.4	July 8, 1902	July 8, 1917	25	2 35	2 35
John M. Benner	72	Long Island sound	122.2	Oct. 27, 1908	Oct. 27, 1933	2 00	244 40	30 55
John M. Benner	Several	Long Island sound	420.0	April 27, 1909	April 27, 1924	2 00	840 00	105 00
John M. Benner	Several	Long Island sound	150 0	Sept. 29, 1909	Sept. 29, 1924	2 00	300 00	37 50
John M. Benner	Several	Long Island sound	342.6	Sept. 29, 1909	Sept. 29, 1924	2 00	685 20	85 65
John M. Benner	996	Raritan bay	93.0	Nov. 2, 1911	Nov. 2, 1926	2 00	186 00	23 25
John M. Benner	1013	Raritan bay	101.6	June 5, 1913	June 5, 1928	2 00	203 20	25 40
John M. Benner	1015	Raritan bay	220.0	May 10, 1913	May 10, 1928	2 00	440 00	55 00
John M. Benner	998	Raritan bay	100.0	June 13, 1911	June 13, 1926	2 00	200 00	25 00
John M. Benner	988	Raritan bay	150.0	Mar. 14, 1911	Mar. 14, 1926	2 00	300 00	37 50
John M. Benner	991	Raritan bay	150.0	May 9, 1911	May 9, 1926	2 00	300 00	37 50
Jacob Brady	249	East Chester bay	27.6	April 10, 1906	April 10, 1921	25	6 90	6 90

SCHEDULE "A"— (*Continued*)

NAME	Lot No.	Location	Acres	Lease granted	Lease expires	Rate of rental	Annual rental	Annual tax
Oswald T. Bergen	272	Long Island sound	11.2	Mar. 11, 1902	Mar. 11, 1917	$0 25	$2 80	$2 80
Bell, Fordham & Bell	89	Long Island sound	12.8	June 9, 1900	June 9, 1915	25	3 20	3 20
S. Y. Bayles	105	Long Island sound	29.0	June 11, 1901	June 11, 1916	25	7 25	7 25
S. Y. Bayles	1026	Raritan bay	71.7	Dec. 9, 1913	Dec. 9, 1928	2 00	143 40	17 93
Bayles & Still	1000	Raritan bay	50.0	May 9, 1911	May 9, 1926	2 00	100 00	12 50
D. B. Colon	950	Raritan bay	4 8	May 14, 1901	May 14, 1916	50	2 40	1 20
E. F. Colon	951	Raritan bay	9.2	April 14, 1903	April 4, 1918	25	2 30	2 30
E. F. Colon	952	Raritan bay	1.6	May 12, 1903	May 12, 1918	25	40	40
Stephen Collins	255	Long Island sound	6.4	April 8, 1902	April 8, 1917	25	1 60	1 60
Stephen Collins	234	Long Island sound	7.2	April 8, 1902	April 8, 1917	25	1 80	1 80
Stephen Collins	265	Long Island sound	2.0	April 8, 1902	April 8, 1917	25	50	50
Bernard Collins	264	Long Island sound	1.6	April 8, 1902	April 8, 1917	25	40	40
Bernard Collins	233	Long Island sound	2.8	April 8, 1902	April 8, 1917	25	70	70
Crocker & Allen	Sec. G–93	Long Island sound	15.5	April 23, 1900	April 23, 1950	25	3 88	3 88
Charles Cowens	Sec. B–93	Long Island sound	15.8	April 23, 1900	April 23, 1950	25	3 95	3 95
James A. Cochrane	997	Raritan bay	108.4	Nov. 2, 1911	Nov. 2, 1926	2 00	216 80	27 10
James A. Cochrane	986	Raritan bay	75.0	Nov. 2, 1911	Nov. 2, 1926	2 00	150 00	18 75
James A. Cochrane	992	Raritan bay	50.0	Nov. 2, 1911	Nov. 2, 1926	2 00	100 00	12 50
Dennis Dougherty	286	East Chester bay	5.8	April 10, 1906	April 10, 1921	25	1 45	1 45
Dennis Dougherty	288	East Chester bay	10.6	April 10, 1906	April 10, 1921	25	2 65	2 65
F. F. Downs	Several	Long Island sound	60.0	July 12, 1910	July 12, 1925	2 00	120 00	15 00
F. F. Downs	Several	Long Island sound	47.0	July 9, 1912	July 9, 1927	2 00	94 00	11 75
Fred. Denz	320	Long Island sound	8.6	Dec. 1, 1910	Dec. 1, 1925	2 00	17 20	2 15
Frazer & Houghwout	1007	Raritan bay	10.0	Nov. 20, 1912	Nov. 20, 1927	2 00	20 00	2 50
Frazer & Houghwout	1010	Raritan bay	30.0	Dec. 10, 1912	Dec. 10, 1927	2 00	60 00	7 50
Alex. C. Frazer	939	Raritan bay	.5	July 8, 1902	July 8, 1917	50	25	13
Alex. C. Frazer	1012	Raritan bay	185.1	Jan 14, 1913	Jan. 14, 1928	2 00	370 20	46 28
A. L. Field	308	Long Island sound	4.4	Jan. 8, 1909	Jan. 8, 1924	2 00	8 80	1 10
Alex. Frazer Co	994	Raritan bay	82.2	Jan. 25, 1911	Jan. 25, 1926	2 00	164 40	20 65
Alex. Frazer Co	1005	Raritan bay	30.0	Oct. 28, 1912	Oct. 28, 1927	2 00	60 00	7 50
Alex. Frazer Co	1011	Raritan bay	152.1	Dec. 10, 1912	Dec. 10, 1927	2 00	304 20	38 03
W. R. Fordham	263	Pelham bay	1.4	May 13, 1903	May 13, 1917	25	35	35
W. R. Fordham	262	Pelham bay	6.4	May 13, 1903	May 13, 1917	25	1 60	1 60
W. R. Fordham	261	Pelham bay	6.2	May 13, 1903	May 13, 1917	25	1 55	1 55
John O. Fordham	229	Pelham bay	18.2	April 8, 1902	April 8, 1917	25	4 55	4 55
John O. Fordham	232	Pelham bay	11.2	June 10, 1902	June 10, 1917	25	2 80	2 80
John O. Fordham	285	Pelham bay	4.6	Dec. 11, 1900	Dec. 11, 1915	25	1 15	1 15
John O. Fordham	231	Pelham bay	5.8	June 10, 1902	June 10, 1917	25	1 45	1 45
John O. Fordham	236	Pelham bay	13.0	Mar. 26, 1909	Mar. 26, 1924	25	3 25	3 25

John O. Fordham	97–L	Long Island sound	66.2	July 25, 1900	July 25, 1915	25	16	55	16 55
John J. Ferry	277	East Chester bay	16.0	April 10, 1906	April 10, 1921	25	4	00	4 00
John J. Ferry	278	East Chester bay	4.0	April 10, 1906	April 10, 1921	25	1	00	1 00
John J. Ferry	279	East Chester bay	19.4	April 10, 1906	April 10, 1921	25	4	85	4 85
John J. Ferry	280	East Chester bay	3.6	April 10, 1906	April 10, 1921	25		90	90
John J. Ferry	281	East Chester bay	5.2	April 10, 1906	April 10, 1921	25	1	30	1 30
Glenwood Oyster Co	120–L	Long Island sound	15.8	Dec. 10, 1901	Dec. 10, 1916	25	3	95	3 95
Glenwood Oyster Co	109–L	Long Island sound	29.4	Dec. 10, 1901	Dec. 10, 1916	25	7	35	7 35
Glenwood Oyster Co	80–L	Long Island sound	159.4	Mar. 13, 1900	Mar. 13, 1915	25	39	85	39 85
E. M. Gunn	96	Long Island sound	5.2	June 19, 1900	June 19, 1915	25	1	30	1 30
Howard Gould	117	Long Island sound	106.0	Aug. 12, 1902	Aug. 12, 1917	25	26	50	26 50
Howard Gould	118	Long Island sound	25.6	Aug. 12, 1902	Aug. 12, 1917	25	6	40	6 40
J. B. Glasier	248	Long Island sound	1.8	Mar. 11, 1902	Mar. 11, 1917	25		45	45
F. C. & H. A. Glasier	246	Pelham bay	2.2	May 13, 1902	May 13, 1917	25		55	55
F. C. & H. A. Glasier	237	Pelham bay	16.6	May 13, 1902	May 13, 1917	25	4	15	4 15
Jesse V. Golden	17	Hempstead harbor	2.2	Dec. 14, 1910	Dec. 14, 1925	2 00	4	40	55
Greenport Oyster Co	Several	Long Island sound	60 0	Oct. 14, 1913	Oct. 14, 1928	2 00	120	00	15 00
W. H. Houghwout	899	Raritan bay	4.2	April 12, 1909	April 12, 1934	2 00	8	40	1 05
W. H. Houghwout	978	Raritan bay	5.0	Sept. 21, 1910	Sept. 21, 1925	25	1	25	1 25
O. & H. Housman	324	Long Island sound	100.0	July 29, 1911	July 29, 1926	2 00	200	00	25 00
Thomas Hassett, Jr	999	Raritan bay	202.4	July 9, 1912	July 9, 1927	2 00	404	80	50 60
Thomas Hassett, Jr	1023	Raritan bay	50.4	Oct. 14, 1913	Oct. 14, 1928	2 00	100	80	12 60
Alfred Jones	92	Long Island sound	25.0	April 10, 1900	April 10, 1950	25	6	25	6 25
Lucius C. Jones	104–L	Long Island sound	25.2	Nov. 13, 1900	Nov. 13, 1915	25	6	30	6 30
Adolph Johnson	Several	Long Island sound	88.7	April 10, 1906	April 10, 1921	25	22	18	22 18
R. W. LaForge	961	Raritan bay	1.0	Dec. 10, 1901	Dec. 10, 1916	25		25	25
W. H. Lockwood	945	Raritan bay	39.4	May 12, 1903	May 12, 1918	25	9	85	9 85
W. H. Lockwood	920	Raritan bay	7.2	July 15, 1913	July 15, 1928	2 00	14	40	1 80
W. H. Lockwood	944	Raritan bay	36.0	Dec. 9, 1902	Dec. 9, 1917	25	9	00	9 00
W. H. Lockwood	927	Raritan bay	155.2	Mar. 13, 1900	Mar. 13, 1915	25	38	80	38 80
C. V. Leviness	238	Long Island sound	3.6	Feb. 11, 1902	Feb. 11, 1917	25		90	90
C. V. Leviness	230	East Chester bay	2.0	April 10, 1906	April 10, 1921	25		50	50
Lewis Bros	299	Long Island sound	20.6	Sept. 11, 1900	Sept. 11, 1915	25	5	15	5 15
Lewis Bros	300	Long Island sound	84.2	Sept. 11, 1900	Sept. 11, 1915	25	21	05	21 05
Loundes & Mills	Sec. B–93	Long Island sound	24.4	April 23, 1900	April 23, 1950	25	6	10	6 10
Loundes & Mills	106	Long Island sound	40.6	Nov. 12, 1901	Nov. 12, 1916	25	10	15	10 15
Loundes & Mills	79	Long Island sound	119.6	July 9, 1912	July 9, 1927	2 00	239	20	29 90
Fred Lundy	322	Long Island sound	21.0	Nov. 23, 1910	Nov. 23, 1925	2 00	42	00	5 25
Loundes, Mills & Thorn	16	Hempstead harbor	10.6	Dec. 14, 1910	Dec. 14, 1925	2 00	21	20	2 65
Loundes, Mills & Thorn	2	Hempstead harbor	4.0	Dec. 14, 1910	Dec. 14, 1925	2 00	8	00	1 00
Loundes, Mills & Thorn	1	Hempstead harbor	4.4	Dec. 14, 1910	Dec. 14, 1925	2 00	8	80	1 10
Loundes, Mills & Thorn	18	Hempstead harbor	22.2	Dec. 14, 1910	Dec. 14, 1925	2 00	44	40	5 55
Lars Larson	11	Hempstead harbor	2.0	Dec. 14, 1910	Dec. 14, 1925	2 00	4	00	50
Lars Larson	13	Hempstead harbor	1.2	Dec. 14, 1910	Dec. 14, 1925	2 00	2	40	30
Cornelius Leary	12	Hempstead harbor	2.2	Dec. 14, 1910	Dec. 14, 1925	2 00		440	55
Loundes, Mills & Ockers	15	Hempstead harbor	1.0	Dec. 14, 1910	Dec. 14, 1925	2 00	2	00	25
Azel F. Merrell	126	Long Island sound	33.6	July 13, 1909	July 13, 1924	2 00	67	20	8 40
Azel F. Merrell	312	Long Island sound	159.4	July 13, 1909	July 13, 1924	2 00	318	80	39 85

SCHEDULE "A"— (*Continued*)

NAME	Lot No.	Location	Acres	Lease granted	Lease expires	Rate of rental	Annual rental	Annual tax
Azel F. Merrell	313	Long Island sound	126.0	July 13, 1909	July 13, 1924	$2 00	$252 00	$31 50
Azel F. Merrell	974	Raritan bay	1.0	Jan. 6, 1909	Jan. 6, 1924	2 00	2 00	25
Azel F. Merrell	316	Long Island sound	57.0	May 11, 1910	May 11, 1925	2 00	114 00	14 25
Azel F. Merrell	982	Raritan bay	45.8	Nov. 23, 1910	Nov. 23, 1925	2 00	91 60	11 45
Azel F. Merrell	1017	Raritan bay	73.7	July 8, 1913	July 8, 1928	2 00	147 40	18 43
Azel F. Merrell	993	Raritan bay	89.4	July 8, 1913	July 8, 1928	2 00	178 80	22 35
Lucretia B. Morey	940	Raritan bay	1.7	July 8, 1902	July 8, 1917	25	43	43
John I. Merrell	1004	Raritan bay	21.4	Oct. 9, 1912	Oct. 9, 1927	2 00	42 80	5 35
John I. Merrell	1014	Raritan bay	14.5	May 13, 1913	May 13, 1928	2 00	29 00	3 63
John I. Merrell	6	Hudson river	4.5	July 8, 1913	July 8, 1928	2 00	9 00	1 13
John I. Merrell	919	Raritan bay	14.4	Aug. 15, 1913	Aug. 15, 1928	2 00	28 80	3 60
Henry S. Marshall	761	Raritan bay	3.0	Dec. 8, 1903	Dec. 8, 1918	25	75	75
Henry S. Marshall	764	Raritan bay	3.0	Dec. 8, 1903	Dec. 8, 1918	25	75	75
Henry S. Marshall	1016	Raritan bay	2.2	July 9, 1912	July 9, 1927	2 00	4 40	55
Rudolph Merrell	311	Long Island sound	108.0	July 13, 1909	July 13, 1924	2 00	216 00	27 00
E. H. Mackey, Jr	Sec. C–93	Long Island sound	27.0	April 23, 1900	April 23, 1950	25	6 75	6 75
E. H. Mackey, Jr	90	Long Island sound	34.0	April 10, 1900	April 10, 1915	25	8 50	8 50
Benjamin Merritt	301	Long Island sound	8	Mar. 11, 1902	Mar. 11, 1917	25	20	20
Benjamin Merritt	302	Long Island sound	1.0	Mar. 11, 1902	Mar. 11, 1917	25	25	25
Benjamin Merritt	303	Long Island sound	1.4	Mar. 11, 1902	Mar. 11, 1917	25	35	35
Benjamin Merritt	325–A	Long Island sound	1.3	June 13, 1911	June 13, 1926	2 00	2 60	33
E. H. Mackey	Sec. E–93	Long Island sound	14.1	April 23, 1900	April 23, 1950	25	3 53	3 53
William J. Mills	314	Long Island sound	20.0	Sept. 13, 1909	Sept. 13, 1924	2 00	40 00	5 00
William J. Mills	Several	Long Island sound	60.0	Sept. 13, 1909	Sept. 13, 1924	2 00	120 00	15 00
William J. Mills	4	Hempstead harbor	1.0	May 9, 1911	May 9, 1926	2 00	2 00	25
William J. Mills	321	Hempstead harbor	40.0	Sept. 1, 1910	Sept. 1, 1925	2 00	80 00	10 00
William J. Mills	Several	Long Island sound	294.0	July 3, 1911	July 3, 1926	2 00	588 00	73 50
William J. Mills	8	Hempstead harbor	.6	June 14, 1910	June 14, 1925	2 00	1 20	15
Matinecock Oyster Co	114–L	Long Island sound	24.2	Dec. 10, 1901	Dec. 10, 1916	25	6 05	6 05
Matinecock Oyster Co	81–L	Long Island sound	38.4	Dec. 10, 1901	Dec. 10, 1916	25	9 60	9 60
Matinecock Oyster Co	Sec. A–73	Long Island sound	200.0	Oct. 7, 1908	Oct. 7, 1923	2 00	400 00	50 00
Mills & Ronik	Plot A	Long Island sound	65.0	April 10, 1906	April 10, 1921	25	16 25	16 25
Mattituck Oyster Co	Several	Long Island sound	280.0	April 27, 1909	April 27, 1924	2 00	560 00	70 00
Mattituck Oyster Co	Several	Long Island sound	120.0	April 27, 1909	April 27, 1924	2 00	240 00	30 00
Mattituck Oyster Co	Several	Long Island sound	60.0	Sept. 29, 1909	Sept. 29, 1924	2 00	120 00	15 00
Mattituck Oyster Co	Several	Long Island sound	17.4	Sept. 29, 1909	Sept. 29, 1924	2 00	34 80	4 35
Mattituck Oyster Co	Several	Long Island sound	45.0	Nov. 10, 1909	Nov. 10, 1924	2 00	90 00	11 25
Mattituck Oyster Co	Several	Long Island sound	35.0	Nov. 11, 1910	Nov. 11, 1925	2 00	70 00	8 75

Merrell & Burbank	933	Raritan bay	44.4	Sept. 20, 1910	Sept. 20, 1925	2 00	88 80	11 10
Merrell & Burbank	928–B	Raritan bay	25.0	Sept. 20, 1910	Sept. 20, 1925	2 00	50 00	6 25
R. R. Mott	6	Hempstead harbor	1.4	Dec. 14, 1910	Dec. 14, 1925	2 00	2 80	35
Timothy T. Mott	7	Hempstead harbor	1.2	Dec. 14, 1910	Dec. 14, 1925	2 00	2 40	30
Merrell & Bayles	3	Hempstead harbor	5.6	Dec. 14, 1910	Dec. 14, 1925	2 00	11 20	1 40
Merrell & Bayles	5	Hempstead harbor	19.0	Dec. 14, 1910	Dec. 14, 1925	2 00	38 00	4 75
William H. Morris	276	East Chester bay	2.6	Aug. 26, 1912	Aug. 26, 1927	2 00	5 20	65
August G. Miller	327	East Chester bay	2.1	Aug. 13, 1912	Aug. 13, 1927	2 00	4 20	53
Modern Oyster Co	Plot D	Long Island sound	86.0	April 10, 1906	April 10, 1921	25	21 50	21 50
William John McGrory	285	East Chester bay	41.2	April 10, 1906	April 10, 1921	25	10 30	10 30
New York Oyster Co	836	Raritan bay	4.3	Sept. 9, 1913	Sept. 9, 1928	2 00	8 60	1 07
New York Oyster Co	1024	Raritan bay	4.3	Oct. 14, 1913	Oct. 14, 1928	2 00	8 60	1 08
New York Oyster Co	201	Raritan bay	10.6	Dec. 9, 1913	Dec. 9, 1928	2 00	21 20	2 65
New York Oyster Co	1027	Raritan bay	81.2	Dec. 9, 1913	Dec. 9, 1928	2 00	162 40	20 30
New York Oyster Co	1025	Raritan bay	124.6	Dec. 9, 1913	Dec. 9, 1928	2 00	249 20	31 15
New York Oyster Co	9	Hudson river	2.7	Sept. 9, 1913	Sept. 9, 1928	2 00	5 40	67
New York Oyster Co	943	Raritan bay	50.2	Dec. 9, 1902	Dec. 9, 1917	25	12 55	12 55
New York Oyster Co	932	Raritan bay	11.2	Mar. 19, 1901	Mar. 19, 1916	25	2 80	2 80
New York Oyster Co	941	Raritan bay	4.8	Dec. 10, 1901	Dec. 10, 1916	25	1 20	1 20
New York Oyster Co	540	Raritan bay	13.4	Jan. 9, 1900	Jan. 9, 1915	25	3 35	3 35
New York Oyster Co	942	Raritan bay	13.8	Nov. 9, 1904	Nov. 9, 1919	25	3 45	3 45
New York Oyster Co	959	Raritan bay	10.0	Nov. 9, 1904	Nov. 9, 1919	25	2 50	2 50
New York Oyster Co	957	Raritan bay	3.0	Jan. 12, 1904	Jan. 12, 1919	25	75	75
New York Oyster Co	958	Raritan bay	95.6	Jan. 12, 1904	Jan. 12, 1919	25	23 90	23 90
New York Oyster Co	967	Raritan bay	67.0	Aug. 8, 1905	Aug. 8, 1920	30	20 10	16 75
New York Oyster Co	968	Raritan bay	7.4	Dec. 12, 1905	Dec. 12, 1920	1 00	7 40	1 85
New York Oyster Co	962	Raritan bay	1.0	May 10, 1904	May 10, 1919	25	25	25
New York Oyster Co	930	Raritan bay	49.8	Oct. 10, 1899	Oct. 10, 1914	25	12 45	12 45
New York Oyster Co	1	Hudson river	294.9	June 14, 1904	June 14, 1919	25	73 72	73 72
New York Oyster Co	970	Raritan bay	8.4	July 14, 1903	July 14, 1918	25	2 10	2 10
New York Oyster Co	969	Raritan bay	1.6	Oct. 14, 1902	Oct. 14, 1917	25	40	40
New York Oyster Co	3	Hudson river	67.6	Nov. 11, 1909	Nov. 11, 1924	2 00	135 20	16 90
New York Oyster Co	4	Hudson river	6.6	Nov. 11, 1909	Nov. 11, 1924	2 00	13 20	1 65
New York Oyster Co	2	Hudson river	167.0	Nov. 11, 1909	Nov. 11, 1924	2 00	334 00	41 75
New York Oyster Co	987	Raritan bay	100.0	Nov. 2, 1911	Nov. 2, 1926	2 00	200 00	25 00
New York Oyster Co	1003	Raritan bay	63.4	Sept. 24, 1912	Sept. 24, 1927	2 00	126 80	15 85
New York Oyster Co	916	Raritan bay	44.2	Oct. 30, 1912	Oct. 30, 1927	2 00	88 40	11 05
New York Oyster Co	918	Raritan bay	12.8	Oct. 30, 1912	Oct. 30, 1927	2 00	25 60	3 20
New York Oyster Co	1006	Raritan bay	101.8	Dec. 17, 1912	Dec. 17, 1927	2 00	203 60	25 45
New York Oyster Co	926	Raritan bay	39.4	Jan. 14, 1913	Jan. 14, 1928	2 00	78 80	9 85
New York Oyster Co	1009	Raritan bay	45.0	Jan. 14, 1914	Jan. 14, 1928	2 00	90 00	11 25
New York Oyster Co	5	Hudson river	284.0	April 8, 1913	April 8, 1928	2 00	568 00	71 00
New York Oyster Co	1022	Raritan bay	33.9	July 8, 1913	July 8, 1928	2 00	67 80	8 48
New York Oyster Co	983	Raritan bay	8.6	Jan. 10, 1911	Jan. 10, 1926	2 00	17 20	2 15
New York Oyster Co	975	Raritan bay	32.0	Mar. 8, 1910	Mar. 8, 1925	2 00	64 00	8 00
New York Oyster Co	976	Raritan bay	10.0	Mar. 8, 1910	Mar. 8, 1925	2 00	20 00	2 50
New York Oyster Co	12	Hudson river	3.7	Aug. 12, 1913	Aug. 12, 1928	2 00	7 40	93
New York Oyster Co	13	Hudson river	46.6	Aug. 12, 1913	Aug. 12, 1928	2 00	93 20	11 65

SCHEDULE "A"— (*Continued*)

NAME	Lot No.	Location	Acres	Lease granted	Lease expires	Rate of rental	Annual rental	Annual tax
New York Oyster Co	E–1	East river	63.3	Oct. 14, 1913	Oct. 14, 1928	$2 00	$126 60	$15 83
New York Oyster Co	11	Hudson river	12.2	July 8, 1913	July 8, 1928	2 00	24 40	3 05
New York Oyster Co	8	Hudson river	4.1	July 8, 1913	July 8, 1928	2 00	8 20	1 03
New York Oyster Co	10	Hudson river	2.1	July 8, 1913	July 8, 1928	2 00	4 20	53
New York Oyster Co	7	Hudson river	2.4	July 12, 1913	July 12, 1928	2 00	4 80	60
Charles Olsen	9	Hempstead harbor	2.2	Dec. 14, 1910	Dec. 14, 1925	2 00	4 40	55
Polworth & Elsworth	931	Raritan bay	12.5	Mar. 19, 1901	Mar. 19, 1916	25	3 13	3 12
Polworth & Elsworth	934	Raritan bay	2.2	Dec. 10, 1901	Dec. 10, 1916	25	55	55
Polworth & Elsworth	935	Raritan bay	9.2	Dec. 10, 1901	Dec. 10, 1916	25	2 30	2 30
Polworth & Elsworth	971	Raritan bay	54.0	Dec. 8, 1903	Dec. 8, 1918	25	13 50	13 50
Polworth & Elsworth	965	Raritan bay	18.0	Dec. 8, 1903	Dec. 8, 1918	25	4 50	4 50
Polworth & Elsworth	917	Raritan bay	11.4	Oct. 14, 1912	Oct. 14, 1927	2 00	22 80	2 85
Polworth & Elsworth	915	Raritan bay	45.8	Oct. 14, 1912	Oct. 14, 1927	2 00	91 60	11 45
John Price, Jr	244	East Chester bay	24.8	April 10, 1906	April 10, 1921	25	6 20	6 20
Pausch Bros. Oyster Co	Several	Long Island sound	150.0	May 10, 1914	May 10, 1919	25	37 50	37 50
Pausch Bros. Oyster Co	Several	Long Island sound	62.5	June 14, 1904	June 14, 1919	25	15 63	15 63
Pausch Bros. Oyster Co	Several	Long Island sound	98.2	May 4, 1904	May 4, 1919	25	24 55	24 55
Pausch Bros. Oyster Co	107	Long Island sound	116.6	Feb. 11, 1902	Feb. 11, 1917	25	29 15	29 15
Pausch Bros. Oyster Co	108	Long Island sound	25.0	May 13, 1902	May 13, 1917	25	6 25	6 25
Pausch Bros. Oyster Co	127–L	Long Iaslnd sound	17.6	Jan. 9, 1906	Jan. 9, 1921	25	4 40	4 40
Pausch Bros. Oyster Co	315	Long Island sound	35.6	Mar. 9, 1910	Mar. 9, 1925	2 00	71 20	8 90
Pausch Bros. Oyster Co	977	Raritan bay	144.0	June 6, 1910	June 6, 1925	2 00	288 00	36 00
Pausch Bros. Oyster Co	1019	Raritan bay	46.3	May 10, 1913	May 10, 1928	2 00	92 60	11 58
Pausch Bros. Oyster Co	1018	Raritan bay	75.5	May 10, 1913	May 10, 1928	2 00	151 00	18 87
Pausch Bros. Oyster Co	1020	Raritan bay	91.8	May 10, 1913	May 10, 1928	2 00	183 60	22 95
Elmer I. Palmer	973	Raritan bay	32.0	Feb. 13, 1906	Feb. 13, 1921	25	8 00	8 00
Elmer I. Palmer	953	Raritan bay	4.6	Jan. 12, 1904	Jan. 12, 1919	25	1 15	1 15
Elmer I. Palmer	897	Raritan bay	32.8	April 10, 1906	April 10, 1921	25	8 20	8 22
Elmer I. Palmer	896	Raritan bay	15.0	April 10, 1906	April 10, 1921	25	3 75	3 75
Elmer I. Palmer	Sec. D	Long Island sound	62.5	Sept. 13, 1904	Sept. 13, 1919	25	15 63	15 63
William Ruddick	239	Long Island sound	6.0	Nov. 10, 1909	Nov. 10, 1924	25	1 50	1 50
George W. Robinson	912–A	Raritan bay	3.0	Oct. 13, 1911	Oct. 13, 1926	2 00	6 00	75
George M. Still, Inc	946	Raritan bay	5.4	Sept. 8, 1903	Sept. 8, 1918	25	1 35	1 35
George M. Still, Inc	947	Raritan bay	1.4	Sept. 8, 1903	Sept. 8, 1918	25	35	35
George M. Still, Inc	849	Raritan bay	6.8	Aug. 1, 1910	Aug. 1, 1935	2 00	13 60	1 70
George M. Still, Inc	1021	Raritan bay	29.7	June 10, 1913	June 10, 1928	2 00	59 40	7 43
E. J. Still	1008	Raritan bay	50.0	Dec. 10, 1912	Dec. 10, 1927	2 00	100 00	12 50
Sealshipt Oyster System	Several	Long Island sound	88.7	April 10, 1906	April 10, 1921	25	22 17	22 18
Sealshipt Oyster System	Several	Long Island sound	255.6	Dec. 12, 1905	Dec. 12, 1920	25	63 90	63 90

Sealshipt Oyster System	929	Raritan bay	43.6	April 11, 1899	April 11, 1914	25	10 90	10 90
Sealshipt Oyster System	966	Raritan bay	36.4	Nov. 10, 1903	Nov. 10, 1918	25	9 10	9 10
Sealshipt Oyster System	688	Raritan bay	3.6	April 13, 1909	April 13, 1924	2 00	7 20	90
Sealshipt Oyster System	Several	Long Island sound	60.0	July 13, 1909	July 13, 1924	2 00	120 00	15 00
Sealshipt Oyster System	Several	Long Island sound	65.0	July 13, 1909	July 13, 1924	2 00	130 00	16 25
Sealshipt Oyster System	913	Raritan bay	42.6	May 11, 1912	May 11, 1927	2 00	85 20	10 65
Sealshipt Oyster System	924	Raritan bay	58.2	Jan. 11, 1913	Jan. 11, 1928	2 00	116 40	14 55
Standard Oyster Co	902	Raritan bay	5.0	Nov. 28, 1910	Nov. 28, 1935	2 00	10 00	1 25
Standard Oyster Co	903	Raritan bay	6.3	Nov. 28, 1910	Nov. 28, 1935	2 0,	12 60	1 58
Standard Oyster Co	904	Raritan bay	4.2	Nov. 28, 1910	Nov. 28, 1935	2 00	8 40	1 05
Standard Oyster Co	905	Raritan bay	4.3	Nov. 28, 1910	Nov. 28, 1935	2 00	8 60	1 08
Sofield & Frazer	995	Raritan bay	104.4	July 25, 1911	July 25, 1926	2 00	208 80	26 10
Henry Stubbs	94	Long Island sound	8.0	April 23, 1900	April 23, 1950	25	2 00	2 00
Henry Stubbs	Sec. A–93	Long Island sound	25.0	April 23, 1900	April 23, 1950	25	6 25	6 25
Stubbs & Allen	Sec. F–93	Long Island sound	16.8	April 23, 1900	April 23, 1950	25	4 20	4 20
George W. Sanbeg	948	Raritan bay	12.8	Dec. 9, 1902	Dec. 9, 1917	25	3 20	3 20
Josiah Thompson	Sec. A & C–91	Long Island sound	18.2	April 10, 1900	April 10, 1950	25	4 55	4 55
Josiah Thompson	122	Long Island sound	4.4	April 12, 1904	April 12, 1919	25	1 10	1 10
Josiah Thompson	123	Long Island sound	1.4	June 14, 1904	June 14, 1919	25	35	35
Josiah Thompson	323	Long Island sound	5.2	Dec. 14, 1910	Dec. 14, 1925	2 00	10 40	1 30
A. K., J. H. & E. S. Tilley	23	Smithtown bay	47.3	Oct. 11, 1904	Oct. 11, 1919	25	11 83	11 83
J. H. Tilley	326	Long Island sound	30.4	Nov. 20, 1911	Nov. 20, 1926	2 00	60 80	7 60
George H. Valentine	981	Raritan bay	11.4	Sept. 21, 1910	Sept. 21, 1925	2 00	22 80	2 85
Charles H. Vroom	Several	Long Island sound	20.6	Nov. 10, 1910	Nov. 10, 1925	2 00	41 20	5 15
Christian Walle	1001	Raritan bay	4.2	July 9, 1912	July 9, 1927	2 00	8 40	1 05
Charles Weber	105	Long Island sound	29.0	June 11, 1901	June 11, 1916	25	7 25	7 25
Charles Weber	10	Hempstead harbor	.6	Dec. 14, 1910	Dec. 14, 1925	2 00	1 20	15
Charles Weber	14	Hempstead harbor	1.6	Dec. 14, 1910	Dec. 14, 1925	2 00	3 20	40
Dennis F. Ward	290	East Chester bay	7.4	June 12, 1906	June 12, 1921	25	1 85	1 85
Dennis F. Ward	292	East Chester bay	9.0	June 12, 1906	June 12, 1921	25	2 25	2 25
Wansor & Whaley	84	Long Island sound	18.2	Sept. 9, 1893	Sept. 9, 1943	25	4 55	4 55
Whaley & Thompson	Sec. H–93	Long Island sound	20.2	April 23, 1900	April 23, 1950	25	5 05	5 05
Weber & Degenhardt	317	Hempstead harbor	22.0	Dec. 14, 1910	Dec. 14, 1925	2 00	44 00	5 50
Charles Zorn	308	East Chester bay	2.0	Aug. 26, 1912	Aug. 26, 1927	2 00	4 00	50
Total	.....	.....	13,437.0	.....	.....	.....	.....	$3,359 48

SCHEDULE "B"

NAME	Lot	Location	Acres	Surrendered to city of New York	Annual Tax
John H. Abrams	294	Jamaica bay	3.8	Oct. 1, 1912	$0 95
John H. Abrams	295	Jamaica bay	1.4	Oct. 1, 1912	35
Wm. H. Abrams	280	Jamaica bay	1.4	Oct. 1, 1912	35
Wm. H. Abrams	244	Jamaica bay	1.4	Oct. 1, 1912	35
Wm. H. Abrams	240	Jamaica bay	.4	Oct. 1, 1912	10
Gustave A. Albright	399	Jamaica bay	1.4	Oct. 1, 1912	35
Gustave A. Albright	395	Jamaica bay	2.0	Oct. 1, 1912	50
Emma W. Abrams	268	Jamaica bay	2.0	Oct. 1, 1912	50
Emma W. Abrams	267	Jamaica bay	2.2	Oct. 1, 1912	55
Major G. Abrams	628	Jamaica bay	.6	Oct. 1, 1912	15
S. D. Abrams, Jr	435	Jamaica bay	3.0	Oct. 1, 1912	75
S. D. Abrams, Jr	384	Jamaica bay	2.6	Oct. 1, 1912	65
Floyd Abrams	398	Jamaica bay	1.2	Oct. 1, 1912	30
Amberman & Bedell	505	Jamaica bay	6.2	Oct. 1, 1912	1 55
E. E. Abrams	29	Jamaica bay	2.6	Oct. 1, 1912	65
E. E. Abrams	28	Jamaica bay	2.6	Oct. 1, 1912	65
Henry Borwegan	310	Jamaica bay	17.0	Oct. 1, 1912	4 25
Henry Borwegan	50	Jamaica bay	1.6	Oct. 1, 1912	40
Henry Borwegan	48	Jamaica bay	2.8	Oct. 1, 1912	70
James A. Bailey	603	Jamaica bay	33.2	Oct. 1, 1912	8 30
C. Josephine Biggs	149	Jamaica bay	1.6	Oct. 1, 1912	40
C. Josephine Biggs	144	Jamaica bay	3.0	Oct. 1, 1916	75
C. Josephine Biggs	524	Jamaica bay	4.0	Oct. 1, 1912	1 00
C. Josephine Biggs	150	Jamaica bay	7.2	Oct. 1, 1912	1 80
C. Josephine Biggs	151	Jamaica bay	.6	Oct. 1, 1912	15
Richard Biggs, Sr	627	Jamaica bay	3.2	Oct. 1, 1912	80
John D. Bush	95	Jamaica bay	1.2	Oct. 1, 1912	30
H. W. Behncke	31	Jamaica bay	2.6	Oct. 1, 1912	65
Mary W. Behncke	167	Jamaica bay	5.8	Oct. 1, 1912	1 45
William C. Baldwin	199	Jamaica bay	5.4	Oct. 1, 1912	1 35
J. G. H. Bedell	455	Jamaica bay	5.4	Oct. 1, 1912	1 35
Nathaniel Carman	492	Jamaica bay	5.8	Oct. 1, 1912	1 45
Nathaniel Carman	116	Jamaica bay	.6	Oct. 1, 1912	15
Nathaniel Carman	115	Jamaica bay	2.4	Oct. 1, 1912	60
Wm. J. Campbell	510	Jamaica bay	6.2	Oct. 1, 1912	1 55
J. O. Carlson	605	Jamaica bay	8.8	Oct. 1, 1912	2 20
Geo. A. Carman	118	Jamaica bay	3.4	Oct. 1, 1912	85
Geo. A. Carman	218	Jamaica bay	4.2	Oct. 1, 1912	1 05
Warren Cornell	453	Jamaica bay	8.6	Oct. 1, 1912	2 15
Warren Cornell	449	Jamaica bay	2.0	Oct. 1, 1912	50
Warren Cornell	372	Jamaica bay	5.0	Oct. 1, 1912	1 25
Henry Cornell	409	Jamaica bay	4.4	Oct. 1, 1912	1 10
Hiram Cadmus	461	Jamaica bay	5.4	Oct. 1, 1912	1 35
Cornell & Palmer	369	Jamaica bay	12.0	Oct. 1, 1912	3 00
Charles Churchill	181	Jamaica bay	5.8	Oct. 1, 1912	1 45
Wm. H. Dickens	250	Jamaica bay	2.8	Oct. 1, 1912	70
George Dickens	43	Jamaica bay	3.2	Oct. 1, 1912	80
Henry W. Davis	343	Jamaica bay	10.6	Oct. 1, 1912	2 65
Henry W. Davis	506	Jamaica bay	5.6	Oct. 1, 1912	1 40
Henry W. Davis	329	Jamaica bay	7.4	Oct. 1, 1912	1 85
Elizabeth Denice	258	Jamaica bay	5.4	Oct. 1, 1912	1 35
Elizabeth Denice	259	Jamaica bay	3.6	Oct. 1, 1912	90
Wm. Henry Dickens	61	Jamaica bay	7.8	Oct. 1, 1912	1 95
Wm. Henry Dickens	213	Jamaica bay	5.0	Oct. 1, 1912	1 25
Geo. W. Doughty	386	Jamaica bay	1.8	Oct. 1, 1912	45
Geo. W. Doughty	415	Jamaica bay	4.4	Oct. 1, 1912	1 10
Geo. W. Doughty	443	Jamaica bay	4.8	Oct. 1, 1912	1 20
Geo. W. Doughty	383	Jamaica bay	5.0	Oct. 1, 1912	1 25
Geo. W. Doughty	377	Jamaica bay	2.0	Oct. 1, 1912	50
Chas. E. Denton	153	Jamaica bay	2.2	Oct. 1, 1912	55
Chas. E. Denton	152	Jamaica bay	3.2	Oct. 1, 1912	80
Wm. B. Dooley	457	Jamaica bay	2.0	Oct. 1, 1912	50
Wm. B. Dooley	463	Jamaica bay	4.0	Oct. 1, 1912	1 00
Edward Dooley	459	Jamaica bay	6.6	Oct. 1, 1912	1 65
Jacob Frederick	566	Jamaica bay	22.2	Oct. 1, 1912	5 55
W. S. Ford	179	Jamaica bay	4.4	Oct. 1, 1912	1 10
John Frederick	458	Jamaica bay	7.6	Oct. 1, 1912	1 90
Glenwood Oyster Co	609	Jamaica bay	12.6	Oct. 1, 1912	3 15
Charles Gateson	597	Jamaica bay	13.6	Oct. 1, 1912	3 40
Joseph B. Geffken	4	Jamaica bay	1.4	Oct. 1, 1912	35
Joseph B. Geffken	5	Jamaica bay	1.5	Oct. 1, 1912	38
Albert Geffken	557	Jamaica bay	.8	Oct. 1, 1912	20
Albert Geffken	2	Jamaica bay	1.0	Oct. 1, 1912	25
Haviland & Odell	368	Jamaica bay	4.6	Oct. 1, 1912	1.15

SCHEDULE "B" — (*Continued*)

NAME	Lot	Location	Acres	Surrendered to city of New York	Annual Tax
Haviland & Odell	465	Jamaica bay	3.6	Oct. 1, 1912	$0 90
A. H. Haack	108	Jamaica bay	4.2	Oct. 1, 1912	1 05
A. H. Haack	7	Jamaica bay	2.2	Oct. 1, 1912	55
A. H. Haack	12½	Jamaica bay	1.8	Oct. 1, 1912	45
John Hanson	34	Jamaica bay	2.8	Oct. 1, 1912	70
John Hanson	69	Jamaica bay	20.2	Oct. 1, 1912	5 05
John Hanson	71	Jamaica bay	2.8	Oct. 1, 1912	70
E. Otis Hovey	600	Jamaica bay	42.8	Oct. 1, 1912	10 70
E. Otis Hovey	587	Jamaica bay	11.0	Oct. 1, 1912	2 75
E. Otis Hovey	617	Jamaica bay	5.6	Oct. 1, 1912	1 40
E. Otis Hovey	198	Jamaica bay	41.6	Oct. 1, 1912	10 40
E. Otis Hovey	227	Jamaica bay	3.0	Oct. 1, 1912	75
E. Otis Hovey	301	Jamaica bay	14.8	Oct. 1, 1912	3 70
E. Otis Hovey	618	Jamaica bay	17.0	Oct. 1, 1912	4 25
Christian Hoobs	619	Jamaica bay	3.6	Oct. 1, 1912	90
Daniel F. Huffmire	264	Jamaica bay	1.6	Oct. 1, 1912	40
L. L. Huffmire	262	Jamaica bay	12.4	Oct. 1, 1912	3 10
L. L. Huffmire	265	Jamaica bay	1.4	Oct. 1, 1912	35
L. L. Huffmire	263	Jamaica bay	5.4	Oct. 1, 1912	1 35
Wynant Huffmire	355	Jamaica bay	7.2	Oct. 1, 1912	1 80
Wynant Huffmire	495	Jamaica bay	3.0	Oct. 1, 1912	75
Wynant Huffmire	562	Jamaica bay	5.6	Oct. 1, 1912	1 40
William J. Hewlett	539	Jamaica bay	8.4	Oct. 1, 1912	2 10
Jarvis Hicks	629	Jamaica bay	.4	Oct. 1, 1912	10
Jarvis Hicks	630	Jamaica bay	1.2	Oct. 1, 1912	30
William Peter Housman	42	Jamaica bay	1.2	Oct. 1, 1912	30
William Peter Housman	24	Jamaica bay	1.8	Oct. 1, 1912	45
Arthur Johnson	558	Jamaica bay	4.0	Oct. 1, 1912	1 00
David Jones	17	Jamaica bay	3.8	Oct. 1, 1912	95
Richard Johnson	91	Jamaica bay	3.2	Oct. 1, 1912	80
Richard Johnson	92	Jamaica bay	1.8	Oct. 1, 1912	45
Mary Johnson	96	Jamaica bay	3.0	Oct. 1, 1912	75
Jane Johnson	132	Jamaica bay	5.0	Oct. 1, 1912	1 25
George H. Johnson	94	Jamaica bay	1.8	Oct. 1, 1912	45
Harry C. Johnson	620	Jamaica bay	1.6	Oct. 1, 1912	40
Harry C. Johnson	439	Jamaica bay	3.0	Oct. 1, 1912	75
Harry C. Johnson	361	Jamaica bay	2.0	Oct. 1, 1912	50
Harry C. Johnson	431	Jamaica bay	2.0	Oct. 1, 1912	50
Ludwig Klee	208	Jamaica bay	.4	Oct. 1, 1912	10
Ludwig Klee	70	Jamaica bay	1.6	Oct. 1, 1912	40
Ludwig Klee	554	Jamaica bay	8.6	Oct. 1, 1912	2 15
Ludwig Klee	63	Jamaica bay	6.2	Oct. 1, 1912	1 55
R. L. & Ludwig Klee, Jr	307	Jamaica bay	10.2	Oct. 1, 1912	2 55
W. H. Lockwood	925	Jamaica bay	3.8	Oct. 1, 1912	95
Fred J. Lancaster	584	Jamaica bay	3.6	Oct. 1, 1912	90
Azel F. Merrell	20	Jamaica bay	5.4	Oct. 1, 1912	1 35
Azel F. Merrell	19	Jamaica bay	2.8	Oct. 1, 1912	70
Azel F. Merrell	3	Jamaica bay	3.8	Oct. 1, 1912	95
Azel F. Merrell	9	Jamaica bay	9.4	Oct. 1, 1912	2 35
Azel F. Merrell	146	Jamaica bay	4.2	Oct. 1, 1912	1 05
Azel F. Merrell	200	Jamaica bay	7.2	Oct. 1, 1912	1 80
Azel F. Merrell	391	Jamaica bay	2.0	Oct. 1, 1912	50
Azel F. Merrell	392	Jamaica bay	1.6	Oct. 1, 1912	40
Azel F. Merrell	535	Jamaica bay	4.2	Oct. 1, 1912	1 05
Azel F. Merrell	488	Jamaica bay	6.8	Oct. 1, 1912	1 70
George H. Mott	403	Jamaica bay	.4	Oct. 1, 1912	10
George H. Mott	408	Jamaica bay	8.8	Oct. 1, 1912	2 20
George H. Mott	424	Jamaica bay	2.4	Oct. 1, 1912	60
George H. Mott	430	Jamaica bay	21.6	Oct. 1, 1912	5 40
George H. Mott	507	Jamaica bay	3.4	Oct. 1, 1912	85
William H. Morrison	551	Jamaica bay	1.2	Oct. 1, 1912	30
William H. Morrison	159	Jamaica bay	5.6	Oct. 1, 1912	1 40
William H. Morrison	345A	Jamaica bay	3.4	Oct. 1, 1912	85
Peter Miller	1	Jamaica bay	3.8	Oct. 1, 1912	95
Peter Miller	16	Jamaica bay	4.8	Oct. 1, 1912	1 20
Ferdinand Moller	87	Jamaica bay	2.0	Oct. 1, 1912	50
Ferdinand Moller	86	Jamaica bay	1.8	Oct. 1, 1912	45
Ferdinand Moller	72	Jamaica bay	2.4	Oct. 1, 1912	60
Ferdinand Moller	530	Jamaica bay	3.4	Oct. 1, 1912	85
Ferdinand Moller	297	Jamaica bay	2.0	Oct. 1, 1912	50
Ferdinand Moller	296	Jamaica bay	2.4	Oct. 1, 1912	60
Ferdinand Moller	6	Jamaica bay	2.6	Oct. 1, 1912	65
George S. Monroe	474	Jamaica bay	14.0	Oct. 1, 1912	3 50

SCHEDULE "B" — (*Continued*)

NAME	Lot	Location	Acres	Surrendered to city of New York	Annual Tax
Monroe & Remsen	464	Jamaica bay	6.0	Oct. 1, 1912	$1 50
John H. McCrodden	517	Jamaica bay	4.6	Oct. 1, 1912	1 15
James H. McCrodden	22	Jamaica bay	4.0	Oct. 1, 1912	1 00
Clara McCrodden	23	Jamaica bay	2.6	Oct. 1, 1912	65
Charles McCrodden	606	Jamaica bay	9.0	Oct. 1, 1912	2 25
New York Oyster Co	478	Jamaica bay	2.8	Oct. 1, 1912	70
William Oelrichs	67	Jamaica bay	3.8	Oct. 1, 1912	95
William Oelrichs	65	Jamaica bay	2.0	Oct. 1, 1912	50
William Oelrichs	302	Jamaica bay	10.2	Oct. 1, 1912	2 55
Anna Oelrichs	66	Jamaica bay	5.2	Oct. 1, 1912	1 30
Charles L. Pearsall	414	Jamaica bay	3.8	Oct. 1, 1912	95
Charles L. Pearsall	421	Jamaica bay	15.6	Oct. 1, 1912	3 90
Carl Peers	308	Jamaica bay	7.6	Oct. 1, 1912	1 90
Carl Peers	133	Jamaica bay	3.8	Oct. 1, 1912	95
Carl Peers	215	Jamaica bay	2.8	Oct. 1, 1912	70
Thomas Pearsall	549	Jamaica bay	2.6	Oct. 1, 1912	65
Thomas Pearsall	621	Jamaica bay	3.2	Oct. 1, 1912	80
Thomas Pearsall	419	Jamaica bay	3.4	Oct. 1, 1912	85
Thomas Pearsall	448	Jamaica bay	1.8	Oct. 1, 1912	45
Thomas Pearsall	423	Jamaica bay	4.6	Oct. 1, 1912	1 15
John F. Quigley	8	Jamaica bay	3.6	Oct. 1, 1912	90
Daniel Rowland	143	Jamaica bay	4.0	Oct. 1, 1912	1 00
Daniel Rowland	346	Jamaica bay	3.4	Oct. 1, 1912	85
Daniel Rowland	345	Jamaica bay	5.6	Oct. 1, 1912	1 40
Daniel Rowland	503	Jamaica bay	3.6	Oct. 1, 1912	90
Willett E. Raynor	561	Jamaica bay	8.0	Oct. 1, 1912	2 00
Willett E. Raynor	260	Jamaica bay	2.8	Oct. 1, 1912	70
Willett E. Raynor	257	Jamaica bay	4.8	Oct. 1, 1912	1 20
Willett E. Raynor	261	Jamaica bay	2.0	Oct. 1, 1912	50
Benjamin Ryder	97	Jamaica bay	1.8	Oct. 1, 1912	45
Benjamin Ryder	93	Jamaica bay	1.8	Oct. 1, 1912	45
Benjamin Ryder	126	Jamaica bay	.6	Oct. 1, 1912	15
Grace L. Ryder	119	Jamaica bay	.8	Oct. 1, 1912	20
William R. Rhinehart	635	Jamaica bay	2.8	Oct. 1, 1912	70
William R. Rhinehart	636	Jamaica bay	3.2	Oct. 1, 1912	80
George Rhinehart	432	Jamaica bay	9.2	Oct. 1, 1912	2 30
William M. Remsen	472	Jamaica bay	29.6	Oct. 1, 1912	7 40
Thomas Remsen	473	Jamaica bay	8.0	Oct. 1, 1912	2 00
Rockaway Oyster Co	516	Jamaica bay	7.2	Oct. 1, 1912	1 80
Rockaway Oyster Co	480	Jamaica bay	3.4	Oct. 1, 1912	85
Rockaway Oyster Co	481	Jamaica bay	3.2	Oct. 1, 1912	80
Rockaway Oyster Co	219	Jamaica bay	6.8	Oct. 1, 1912	1 70
Rockaway Oyster Co	224	Jamaica bay	2.0	Oct. 1, 1912	50
Rockaway Oyster Co	282	Jamaica bay	7.6	Oct. 1, 1912	1 90
Rockaway Oyster Co	84	Jamaica bay	3.0	Oct. 1, 1912	75
Rockaway Oyster Co	332	Jamaica bay	5.8	Oct. 1, 1912	1 45
Rockaway Oyster Co	85	Jamaica bay	1.8	Oct. 1, 1912	45
Rockaway Oyster Co	80	Jamaica bay	4.4	Oct. 1, 1912	1 10
Rockaway Oyster Co	79	Jamaica bay	1.8	Oct. 1, 1912	45
Rockaway Oyster Co	158	Jamaica bay	6.6	Oct. 1, 1912	1 65
Rockaway Oyster Co	622	Jamaica bay	11.6	Oct. 1, 1912	2 90
Rockaway Oyster Co	135	Jamaica bay	4.2	Oct. 1, 1912	1 05
Rockaway Oyster Co	229	Jamaica bay	10.4	Oct. 1, 1912	2 60
Rockaway Oyster Co	82	Jamaica bay	5.8	Oct. 1, 1912	1 45
Rockaway Oyster Co	83	Jamaica bay	5.0	Oct. 1, 1912	1 25
Rockaway Oyster Co	136	Jamaica bay	4.0	Oct. 1, 1912	1 00
H. W. Rohde	75	Jamaica bay	4.0	Oct. 1, 1912	1 00
H. W. Rohde	74	Jamaica bay	3.2	Oct. 1, 1912	80
H. W. Rohde	230	Jamaica bay	5.8	Oct. 1, 1912	1 45
Sealshipt Oyster System	542	Jamaica bay	2.8	Oct. 1, 1912	70
Sealshipt Oyster System	64	Jamaica bay	1.0	Oct. 1, 1912	25
Sealshipt Oyster System	209	Jamaica bay	12.6	Oct. 1, 1912	3 15
Sealshipt Oyster System	68	Jamaica bay	2.0	Oct. 1, 1912	50
Sealshipt Oyster System	207	Jamaica bay	14.2	Oct. 1, 1912	3 55
Sealshipt Oyster System	327	Jamaica bay	11.6	Oct. 1, 1912	2 90
Julia Sofield	140	Jamaica bay	27.0	Oct. 1, 1912	6 75
Julia Sofield	170	Jamaica bay	4.4	Oct. 1, 1912	1 10
Ella Sofield	90	Jamaica bay	22.6	Oct. 1, 1912	5 65
C. S. Sofield	522	Jamaica bay	25.6	Oct. 1, 1912	6 40
C. S. Sofield	536	Jamaica bay	1.4	Oct. 1, 1912	35
C. S. Sofield	556	Jamaica bay	15.2	Oct. 1, 1912	3 80
C. S. Sofield	526	Jamaica bay	20.0	Oct. 1, 1912	5 00
C. S. Sofield	523	Jamaica bay	1.4	Oct. 1, 1912	35
C. S. Sofield	110	Jamaica bay	5.2	Oct. 1, 1912	1 30
C. S. Sofield	171	Jamaica bay	2.4	Oct. 1, 1912	60

SCHEDULE "B" — (*Continued*)

NAME	Lot	Location	Acres	Surrendered to city of New York	Annual Tax
C. S. Sofield	469	Jamaica bay	12.0	Oct. 1, 1912	$3 00
Ezra Sprague	375	Jamaica bay	1.2	Oct. 1, 1912	30
Ezra Sprague	433A	Jamaica bay	1.6	Oct. 1, 1912	40
Ezra Sprague	433B	Jamaica bay	1.6	Oct. 1, 1912	40
Ezra Sprague	434	Jamaica bay	2.4	Oct. 1, 1912	60
Ezra & Theodore Sprague	451	Jamaica bay	5.2	Oct. 1, 1912	1 30
Ezra & Theodore Sprague	450	Jamaica bay	5.8	Oct. 1, 1912	1 45
Ezra & Theodore Sprague	366	Jamaica bay	1.2	Oct. 1, 1912	30
Ezra & Theodore Sprague	454	Jamaica bay	9.0	Oct. 1, 1912	2 25
Theodore Sprague	429	Jamaica bay	7.2	Oct. 1, 1912	1 80
Theodore Sprague	396	Jamaica bay	1.4	Oct. 1, 1912	35
Valentine Smith	365	Jamaica bay	2.0	Oct. 1, 1912	50
Valentine Smith	362	Jamaica bay	3.6	Oct. 1, 1912	90
George S. Smith	397	Jamaica bay	.8	Oct. 1, 1912	20
J. Frank Smith	441	Jamaica bay	1.0	Oct. 1, 1912	25
Samuel E. Smith	440	Jamaica bay	2.6	Oct. 1, 1912	65
J. F. & S. E. Smith	385	Jamaica bay	3.0	Oct. 1, 1912	75
Webb Sprague	425	Jamaica bay	3.0	Oct. 1, 1912	75
Webb Sprague	422	Jamaica bay	2.8	Oct. 1, 1912	70
Webb Sprague	426	Jamaica bay	3.0	Oct. 1, 1912	75
H. W. Schmeelk Oyster Co	573	Jamaica bay	11.0	Oct. 1, 1912	2 75
H. W. Schmeelk Oyster Co	581	Jamaica bay	5.6	Oct. 1, 1912	1 40
H. W. Schmeelk Oyster Co	580	Jamaica bay	11.4	Oct. 1, 1912	2 85
H. W. Schmeelk Oyster Co	577	Jamaica bay	3.8	Oct. 1, 1912	95
H. W. Schmeelk Oyster Co	273	Jamaica bay	8.8	Oct. 1, 1912	2 20
H. W. Schmeelk Oyster Co	225	Jamaica bay	5.2	Oct. 1, 1912	1 30
H. W. Schmeelk Oyster Co	232	Jamaica bay	4.0	Oct. 1, 1912	1 00
H. W. Schmeelk Oyster Co	276	Jamaica bay	3.0	Oct. 1, 1912	75
H. W. Schmeelk Oyster Co	485	Jamaica bay	23.2	Oct. 1, 1912	5 80
H. W. Schmeelk Oyster Co	36	Jamaica bay	5.4	Oct. 1, 1912	1 35
H. W. Schmeelk Oyster Co	37	Jamaica bay	3.0	Oct. 1, 1912	75
H. W. Schmeelk Oyster Co	39	Jamaica bay	4.8	Oct. 1, 1912	1 20
H. W. Schmeelk Oyster Co	99	Jamaica bay	1.6	Oct. 1, 1912	40
H. W. Schmeelk Oyster Co	62	Jamaica bay	5.2	Oct. 1, 1912	1 30
H. W. Schmeelk Oyster Co	35	Jamaica bay	8.0	Oct. 1, 1912	2 00
H. W. Schmeelk Oyster Co	337	Jamaica bay	6.6	Oct. 1, 1912	1 65
H. W. Schmeelk Oyster Co	76	Jamaica bay	1.8	Oct. 1, 1912	45
H. W. Schmeelk Oyster Co	147	Jamaica bay	12.6	Oct. 1, 1912	3 15
H. W. Schmeelk Oyster Co	192	Jamaica bay	1.2	Oct. 1, 1912	30
H. W. Schmeelk Oyster Co	107	Jamaica bay	4.8	Oct. 1, 1912	1 20
H. W. Schmeelk Oyster Co	351	Jamaica bay	8.0	Oct. 1, 1912	2 00
H. W. Schmeelk Oyster Co	191	Jamaica bay	1.6	Oct. 1, 1912	40
H. W. Schmeelk Oyster Co	532	Jamaica bay	14.0	Oct. 1, 1912	3 50
H. W. Schmeelk Oyster Co	106	Jamaica bay	1.4	Oct. 1, 1912	35
H. W. Schmeelk Oyster Co	38	Jamaica bay	3.4	Oct. 1, 1912	85
H. W. Schmeelk Oyster Co	109	Jamaica bay	6.6	Oct. 1, 1912	1 65
H. W. Schmeelk Oyster Co	624	Jamaica bay	2.0	Oct. 1, 1912	50
H. W. Schmeelk Oyster Co	208	Jamaica bay	6.4	Oct. 1, 1912	1 60
H. W. Schmeelk Oyster Co	209	Jamaica bay	.4	Oct. 1, 1912	10
H. W. Schmeelk Oyster Co	142	Jamaica bay	5.0	Oct. 1, 1912	1 25
H. W. Schmeelk Oyster Co	328	Jamaica bay	5.4	Oct. 1, 1912	1 35
H. W. Schmeelk Oyster Co	130	Jamaica bay	2.4	Oct. 1, 1912	60
H. W. Schmeelk Oyster Co	193	Jamaica bay	3.2	Oct. 1, 1912	80
H. W. Schmeelk Oyster Co	172	Jamaica bay	27.2	Oct. 1, 1912	6 80
H. W. Schmeelk Oyster Co	176	Jamaica bay	3.8	Oct. 1, 1912	95
H. W. Schmeelk Oyster Co	174	Jamaica bay	5.0	Oct. 1, 1912	1 25
H. W. Schmeelk Oyster Co	486	Jamaica bay	2.8	Oct. 1, 1912	70
H. W. Schmeelk Oyster Co	78	Jamaica bay	4.4	Oct. 1, 1912	1 10
H. W. Schmeelk Oyster Co	141	Jamaica bay	6.0	Oct. 1, 1912	1 50
H. W. Schmeelk Oyster Co	148	Jamaica bay	3.2	Oct. 1, 1912	80
H. W. Schmeelk Oyster Co	493	Jamaica bay	2.8	Oct. 1, 1912	70
H. W. Schmeelk Oyster Co	533	Jamaica bay	13.2	Oct. 1, 1912	3 30
H. W. Schmeelk Oyster Co	145	Jamaica bay	5.2	Oct. 1, 1912	1 30
H. W. Schmeelk Oyster Co	489	Jamaica bay	12.6	Oct. 1, 1912	3 15
H. W. Schmeelk Oyster Co	58	Jamaica bay	2.4	Oct. 1, 1912	60
H. W. Schmeelk Oyster Co	220	Jamaica bay	4.2	Oct. 1, 1912	1 05
H. W. Schmeelk Oyster Co	226	Jamaica bay	1.8	Oct. 1, 1912	45
H. W. Schmeelk Oyster Co	335	Jamaica bay	6.6	Oct. 1, 1912	1 65
H. W. Schmeelk Oyster Co	623	Jamaica bay	5.0	Oct. 1, 1912	1 25
H. W. Schmeelk Oyster Co	59	Jamaica bay	6.0	Oct. 1, 1912	1 50
J. H. Schmeelk, No. 1	45	Jamaica bay	3.6	Oct. 1, 1912	90
J. H. Schmeelk, No. 1	49	Jamaica bay	4.0	Oct. 1, 1912	1 00
J. H. Schmeelk, No. 2	11	Jamaica bay	3.6	Oct. 1, 1912.	90

SCHEDULE "B" — (*Continued*)

NAME	Lot	Location	Acres	Surrendered to city of New York	Amount Tax
J. H. Schmeelk, No. 2	21	Jamaica bay	3.8	Oct. 1, 1912	$0 95
J. H. Schmeelk, No. 2	632	Jamaica bay	.8	Oct. 1, 1912	20
J. H. Schmeelk, No. 3	14	Jamaica bay	4.0	Oct. 1, 1912	1 00
J. H. Schmeelk, No. 3	13	Jamaica bay	3.0	Oct. 1, 1912	75
J. H. Schmeelk, No. 3	18	Jamaica bay	4.2	Oct. 1, 1912	1 05
George T. Soper	413	Jamaica bay	7.2	Oct. 1, 1912	1 80
George T. Soper	614	Jamaica bay	12.4	Oct. 1, 1912	3 10
George T. Soper	420	Jamaica bay	6.4	Oct. 1, 1912	1 60
George T. Soper	611	Jamaica bay	4.8	Oct. 1, 1912	1 20
George T. Soper	437	Jamaica bay	5.8	Oct. 1, 1912	1 45
Sofield & Frazer	154	Jamaica bay	1.6	Oct. 1, 1912	40
Sofield & Frazer	156	Jamaica bay	.8	Oct. 1, 1912	20
Sofield & Frazer	169	Jamaica bay	3.2	Oct. 1, 1912	80
Sofield & Frazer	168	Jamaica bay	3.2	Oct. 1, 1912	80
Sprague & Doughty	444	Jamaica bay	1.7	Oct. 1, 1912	43
Sprague & Doughty	381	Jamaica bay	3.4	Oct. 1, 1912	85
Sprague & Doughty	447	Jamaica bay	3.2	Oct. 1, 1912	80
Sprague & Doughty	382	Jamaica bay	2.4	Oct. 1, 1912	60
Sprague & Doughty	387	Jamaica bay	13.8	Oct. 1, 1912	3 45
Sprague & Doughty	418	Jamaica bay	3.0	Oct. 1, 1912	75
Sprague & Doughty	442	Jamaica bay	5.2	Oct. 1, 1912	1 30
Sprague & Doughty	380	Jamaica bay	.8	Oct. 1, 1912	20
Sprague & Doughty	379	Jamaica bay	1.8	Oct. 1, 1912	45
Smith Sprague	394	Jamaica bay	1.8	Oct. 1, 1912	45
Smith Sprague	390	Jamaica bay	4.0	Oct. 1, 1912	1 00
Smith Sprague	570	Jamaica bay	5.0	Oct. 1, 1912	1 25
Smith Sprague	417	Jamaica bay	1.6	Oct. 1, 1912	40
Smith Sprague	416	Jamaica bay	2.2	Oct. 1, 1912	55
Smith Sprague	393	Jamaica bay	1.6	Oct. 1, 1912	40
Smith Sprague	438	Jamaica bay	3.0	Oct. 1, 1912	75
Smith Sprague	388	Jamaica bay	3.6	Oct. 1, 1912	90
Herman M. Schmeelk	411	Jamaica bay	29.8	Oct. 1, 1912	7 45
Herman M. Schmeelk	412	Jamaica bay	13.8	Oct. 1, 1912	3 45
Herman M. Schmeelk	468	Jamaica bay	5.4	Oct. 1, 1912	1 35
Herman M. Schmeelk	509	Jamaica bay	80.8	Oct. 1, 1912	20 20
Herman M. Schmeelk	541	Jamaica bay	26.8	Oct. 1, 1912	6 70
W. Elsworth Sprague	405	Jamaica bay	9.2	Oct. 1, 1912	2 30
W. Elsworth Sprague	406	Jamaica bay	7.2	Oct. 1, 1912	1 80
W. Elsworth Sprague	470	Jamaica bay	33.2	Oct. 1, 1912	8 30
W. R. Schenck	501	Jamaica bay	25.8	Oct. 1, 1912	6 45
M. H. Sickman	599	Jamaica bay	7.2	Oct. 1, 1912	1 80
William M. Schmeelk	15	Jamaica bay	3.2	Oct. 1, 1912	80
William M. Schmeelk	316	Jamaica bay	8.8	Oct. 1, 1912	2 20
H. Schlatenberg	238	Jamaica bay	4.0	Oct. 1, 1912	1 00
William T. Schmeelk	98	Jamaica bay	9.2	Oct. 1, 1912	2 30
George A. Schmeelk	210	Jamaica bay	10.8	Oct. 1, 1912	2 70
George A. Schmeelk	281	Jamaica bay	2.2	Oct. 1, 1912	55
George A. Schmeelk	103	Jamaica bay	2.2	Oct. 1, 1912	55
William F. Schmeelk	30	Jamaica bay	2.4	Oct. 1, 1912	60
William H. Sellars	596	Jamaica bay	7.2	Oct. 1, 1912	1 80
Erastus W. Seaman	178	Jamaica bay	3.6	Oct. 1, 1912	90
J. H. & J. H. (Jr.) Vreeland	521	Jamaica bay	5.0	Oct. 1, 1912	1 25
J. H. & J. H. (Jr.) Vreeland	607	Jamaica bay	10.0	Oct. 1, 1912	2 50
J. H. & J. H. (Jr.) Vreeland	185	Jamaica bay	12.0	Oct. 1, 1912	3 00
J. H. & J. H. (Jr.) Vreeland	633	Jamaica bay	5.8	Oct. 1, 1912	1 45
Peter William Von Ahnen	500	Jamaica bay	2.4	Oct. 1, 1912	60
Peter William Von Ahnen	204	Jamaica bay	1.0	Oct. 1, 1912	25
Peter William Von Ahnen	32	Jamaica bay	10.6	Oct. 1, 1912	2 65
Peter William Von Ahnen	205	Jamaica bay	8.2	Oct. 1, 1912	2 05
Peter William Von Ahnen	41	Jamaica bay	6.4	Oct. 1, 1912	1 60
Peter William Von Ahnen	304	Jamaica bay	11.4	Oct. 1, 1912	2 85
Richard Van Houten	525	Jamaica bay	14.8	Oct. 1, 1912	3 70
Henry Von Twistern	555	Jamaica bay	1.2	Oct. 1, 1912	30
Henry Von Twistern	12	Jamaica bay	2.4	Oct. 1, 1912	60
C. P. Vreeland	608	Jamaica bay	4.2	Oct. 1, 1912	1 05
Annie Von Ahnen	40	Jamaica bay	4.8	Oct. 1, 1912	1 20
W. R. Wilson	518	Jamaica bay	12.8	Oct. 1, 1912	3 20
W. R. Wilson	520	Jamaica bay	36.0	Oct. 1, 1912	9 00
Henry Warren	544	Jamaica bay	9.4	Oct. 1, 1912	2 35
H. L. C. Wenk	567	Jamaica bay	9.6	Oct. 1, 1912	2 40
H. L. C. Wenk	568	Jamaica bay	10.0	Oct. 1, 1912	2 50
H. L. C. Wenk	569	Jamaica bay	3.2	Oct. 1, 1912	80
Edward Weber	183	Jamaica bay	3.2	Oct. 1, 1912	80

SCHEDULE "B" — (*Continued*)

NAME	Lot	Location	Acres	Surrendered to city of New York	Amount Tax
Edward Weber	44	Jamaica bay	2.0	Oct. 1, 1912	$0 50
Edward Weber	10	Jamaica bay	4.4	Oct. 1, 1912	1 10
Edward Weber	47	Jamaica bay	5.8	Oct. 1, 1912	1 45
W. A. Wynant	266	Jamaica bay	6.4	Oct. 1, 1912	1 60
Victor White	162	Jamaica bay	4.4	Oct. 1, 1912	1 10
John Wittaker	231	Jamaica bay	4.4	Oct. 1, 1912	1 10
J. E. Watts	460	Jamaica bay	5.2	Oct. 1, 1912	1 30
Elizabeth Watts	456	Jamaica bay	6.8	Oct. 1, 1912	1 70
W. H. Watts	445	Jamaica bay	2.8	Oct. 1, 1912	70
Wofield & Mesereau	100	Jamaica bay	2.0	Oct. 1, 1912	50
Wofield & Mesereau	582	Jamaica bay	3.6	Oct. 1, 1912	90
Wofield & Mesereau	101	Jamaica bay	2.8	Oct. 1, 1912	70
Wofield & Mesereau	195	Jamaica bay	2.0	Oct. 1, 1912	50
Wofield & Mesereau	285	Jamaica bay	2.8	Oct. 1, 1912	70
Wofield & Mesereau	102	Jamaica bay	1.4	Oct. 1, 1912	35
Total	.....	.....	2,296.6	.....	$574 16

SCHEDULE "C"

NAME	Lot	Location	Acres	Franchise granted	Annual tax
N. S. Ackerly & Son Co	85	Long Island sound	51.2	Mar. 27, 1900	$12 80
N. S. Ackerly & Son Co	87	Long Island sound	60.6	Mar. 27, 1900	15 15
N. S. Ackerly & Son Co	86	Long Island sound	109.2	Mar. 27, 1900	27 30
N. S. Ackerly & Son Co	Several	Long Island sound	16.2	April 18, 1900	4 05
N. S. Ackerly & Son Co	Several	Long Island sound	88.9	Sept. 4, 1888	22.23
N. S. Ackerly & Son Co	Several	Long Island sound	30.0	Dec. 11, 1888	7 50
N. S. Ackerly & Son Co	Several	Long Island sound	30.0	Mar. 18, 1891	7 50
N. S. Ackerly & Son Co	Several	Long Island sound	40.0	Jan. 27, 1891	10 00
N. S. Ackerly & Son Co	Several	Long Island sound	40.0	Dec. 11, 1888	10 00
N. S. Ackerly & Son Co	16	Long Island sound	21.0	Nov. 7, 1888	5 25
N. S. Ackerly & Son Co	480	Raritan bay	4.6	Feb. 11, 1890	1 15
N. S. Ackerly	14	Long Island sound	172.2	July 6, 1888	43 05
N. S. Ackerly	Several	Long Island sound	60.0	Jan. 12, 1889	15 00
S. LeRoy Ackerly	Section C	Smithtown bay	46.8	Feb. 10, 1891	11 70
S. LeRoy Ackerly	Several	Long Island sound	130.0	Mar. 18, 1891	32 50
H. Davis Ackerly	16	Long Island sound	56.0	Nov. 7, 1888	14 00
H. Davis Ackerly	17	Long Island sound	193.6	Nov. 7, 1888	48 40
Androvette & Thompson	392	Raritan bay	11.0	July 9, 1899	2 75
Androvette & Thompson	148	Raritan bay	3.6	Aug. 13, 1889	90
Androvette & Thompson	339	Raritan bay	8.3	Jan. 14, 1890	2 07
Androvette & Thompson	337	Raritan bay	4.0	Jan. 14, 1890	1 00
Androvette & Thompson	568	Raritan bay	2.1	Feb. 11, 1890	53
Androvette & Thompson	236	Raritan bay	31.9	Oct. 14, 1890	7 98
Androvette & Thompson	789	Raritan bay	10.2	July 14, 1891	2 55
Androvette & Thompson	807	Raritan bay	2.6	July 14, 1891	65
Androvette & Thompson	570	Raritan bay	2.6	Mar. 11, 1890	65
Herbert Androvette	178	Raritan bay	2.4	May 14, 1889	60
A. W. Androvette	449	Raritan bay	2.4	Mar. 11, 1890	60
Andrew Anderson	424	Raritan bay	2.8	Mar. 11, 1890	70
Bedell & Lang	114	Raritan bay	10.5	May 14, 1889	2 63
Elmer T. Butler	553	Raritan bay	2.3	Feb. 11, 1890	57
Elmer T. Butler	388	Raritan bay	2.4	Mar. 11, 1890	60
Elmer T. Butler	392	Raritan bay	20.5	July 9, 1889	5 13
Elmer T. Butler	31	Raritan bay	.6	Nov. 7, 1888	15
Elmer T. Butler	78	Raritan bay	27.2	April 2, 1888	6 80
Elmer T. Butler	283	Raritan bay	2.2	Mar. 11, 1890	55
Elmer T. Butler	871	Raritan bay	2.6	Feb. 14, 1893	65
Elmer T. Butler	839	Raritan bay	4.2	Feb. 14, 1893	1 05
L. W. Bedell	225	Raritan bay	1.6	Feb. 4, 1888	40

L. W. Bedell	213	Raritan bay	1.6	Feb. 17, 1888	40
L. W. Bedell	219	Raritan bay	3.0	Feb. 4, 1888	75
L. W. Bedell	206	Raritan bay	4.8	May 14, 1889	1 20
L. W. Bedell	204	Raritan bay	11.5	May 14, 1888	2 88
L. W. Bedell	221	Raritan bay	4.8	May 14, 1889	1 20
L. W. Bedell	223	Raritan bay	3.6	May 14, 1889	90
L. W. Bedell	115	Raritan bay	8.4	Feb. 6, 1888	2 10
Chas. Bedell	767	Raritan bay	3.3	Aug. 7, 1891	83
Chas. Bedell	183	Raritan bay	2.0	Mar. 11, 1890	50
Chas. Bedell	770	Raritan bay	1.4	Jan. 12, 1892	35
Chas. Bedell	821	Raritan bay	1.8	Aug. 7, 1891	45
Chas. Bedell	820	Raritan bay	3.2	Aug. 7, 1891	80
B. F. & H. E. Bush	481	Raritan bay	47.0	Jan. 14, 1890	11 75
B. F. & H. E. Bush	456	Raritan bay	1.6	Jan. 14, 1890	40
B. F. & H. E. Bush	468	Raritan bay	5.3	Jan. 14, 1890	1 33
B. F. & H. E. Bush	467	Raritan bay	4.15	Jan. 14, 1890	1 04
B. F. & H. E. Bush	861	Raritan bay	25.2	Mar. 12, 1891	6 30
Wm. P. Burbank	509	Raritan bay	3.9	Feb. 11, 1890	98
F. T. Boerum	27	Little Neck bay	2.5	Jan. 8, 1889	63
Roscoe Bishop	9	Long Island sound	38.7	Nov. 7, 1888	9 67
Jos. M. Belford	Several	Long Island sound	120.0	Mar. 18, 1891	30 00
Jos. M. Belford	Several	Long Island sound	60.0	Mar. 18, 1891	15 00
Jos. M. Belford	Several	Long Island sound	70.0	Jan. 12, 1892	17 50
O. & M. G. Bartow	10	Long Island sound	17.5	Nov. 7, 1888	4 38
Jacob Bumstead	66	Long Island sound	18.0	July 9, 1889	4 50
W. D. Bush	11	Raritan bay	2.5	Nov. 7, 1888	63
W. D. Bush	457	Raritan bay	3.7	Jan. 14, 1890	92
Daniel Burbank	382	Raritan bay	16.8	Mar. 11, 1890	4 20
Daniel Burbank	380	Raritan bay	12.0	Nov. 12, 1889	3 00
Daniel Burbank	386	Raritan bay	5.3	May 12, 1889	1 33
Daniel Burbank	862	Raritan bay	24.6	Aug. 9, 1892	6 15
Daniel Burbank	696	Raritan bay	19.9	Mar. 12, 1891	4 97
Daniel Burbank	288	Raritan bay	15.4	May 14, 1889	3 85
Wm. Buchanan	42	Raritan bay	4.7	Nov. 7, 1888	1 18
Wm. Buchanan	690	Raritan bay	2.5	Mar. 12, 1891	63
Geo. S. Burbank	858	Raritan bay	12.0	June 8, 1892	3 00
Adaline Bedell	185	Raritan bay	1.2	May 14, 1889	30
John M. Benner	2	Long Island sound	67.2	Jan. 8, 1889	16 80
John M. Benner	55	Long Island sound	14.0	May 14, 1889	3 50
John M. Benner	8	Long Island sound	75.3	Oct. 1, 1888	18 83
John M. Benner	51	Long Island sound	8.8	Nov. 7, 1888	2 20
John M. Benner	68	Long Island sound	28.2	May 14, 1889	7 05
John M. Benner	50	Long Island sound	8.8	Nov. 7, 1888	2 20
John M. Benner	49	Long Island sound	8.8	Nov. 7, 1888	2 20
John M. Benner	67	Long Island sound	12.3	July 9, 1889	3 07
John M. Benner	42	Long Island sound	8.8	Nov. 7, 1888	2 20
John M. Benner	43	Long Island sound	8.8	Nov. 7, 1888	2 20

SCHEDULE "C"— (*Continued*)

NAME	Lot	Location	Acres	Franchise granted	Annual tax
John M. Benner	44	Long Island sound	8.8	Nov. 7, 1888	$2 20
John M. Benner	45	Long Island sound	8.8	Nov. 7, 1888	2 20
John M. Benner	46	Long Island sound	8.8	Nov. 7, 1888	2 20
John M. Benner	47	Long Island sound	8.8	Nov. 7, 1888	2 20
John M. Benner	48	Long Island sound	8.8	Nov. 7, 1888	2 20
John M. Benner	238	Raritan bay	15.0	Aug. 12, 1890	3 75
Peter Cannon	733	Raritan bay	.2	May 12, 1891	05
Alfred Cannon	454	Raritan bay	.8	May 6, 1890	20
Thomas Colon	448	Raritan bay	.9	Feb. 11, 1890	23
D. B. Colon	418½	Raritan bay	1.7	July 14, 1891	43
J. W. Cole	469	Raritan bay	1.1	Jan. 14, 1890	28
J. W. Cole	507	Raritan bay	4.9	Feb. 11, 1890	1 22
Wm. Cooley	277	Raritan bay	5.3	Mar. 11, 1890	1 33
F. K. Conant	Several	Little Neck Bay	7.5	Feb. 12, 1889	1 88
F. K. Conant	Several	Little Neck bay	5.0	Jan. 8, 1889	1 25
A. M. Cannon	45	Raritan bay	.7	Mar. 5, 1888	18
A. M. Cannon	735	Raritan bay	2.2	May 12, 1891	55
Geo. E. Call	41	Long Island sound	74.9	Nov. 7, 1888	18 73
B. W. Carll	Several	Long Island sound	90.0	Jan. 12, 1889	22 50
B. W. Carll	Several	Long Island sound	120.0	Mar. 18, 1881	30 00
Geo. W. Chauncey	Several	Long Island sound	100.0	Sept. 6, 1899	25 00
C. V. Decker	851	Raritan bay	7.8	Feb. 11, 1892	1 95
C. V. Decker	853	Raritan bay	7.2	Feb. 11, 1892	1 80
C. V. Decker	50	Raritan bay	1.2	Mar. 5, 1888	30
C. V. Decker	444	Raritan bay	6.3	Feb. 11, 1890	1 58
C. V. Decker	870	Raritan bay	3.6	Feb. 14, 1893	90
C. V. Decker	876	Raritan bay	38.4	Feb. 14, 1893	9 60
C. C. & C. M. Decker	25	Raritan bay	.9	April 2, 1888	23
C. C. & C. M. Decker	666	Raritan bay	1.4	May 6, 1890	35
C. C. & C. M. Decker	670	Raritan bay	4.7	May 6, 1890	1 18
Henry De Hart	1	Raritan bay	7.8	June 4, 1888	1 95
Henry De Hart	429	Raritan bay	38.8	May 14, 1889	9 70
Henry De Hart	427	Raritan bay	16.0	May 14, 1889	4 00
Henry De Hart	419	Raritan bay	16.1	May 6, 1890	4 03
Henry De Hart	421	Raritan bay	7.1	May 6, 1890	1 78
Henry De Hart	866	Raritan bay	12.6	Dec. 29, 1892	3 15
Sherman Decker	116	Raritan bay	1.55	Mar. 11, 1890	39
Sherman Decker	22	Raritan bay	.5	April 2, 1888	13
Sherman Decker	465	Raritan bay	5.1	Feb. 11, 1890	1 28

Sherman Decker	466	Raritan bay	4.0	Feb. 11, 1890	1 00
Sherman Decker	668	Raritan bay	4.4	May 6, 1890	1 10
Sherman Decker	681	Raritan bay	3 3	June 10, 1890	83
Sherman Decker	687	Raritan bay	6.0	Mar. 18, 1891	1 50
Sherman Decker	778	Raritan bay	3.5	July 14, 1891	88
Sherman Decker	780	Raritan bay	10.1	July 14, 1891	2 53
T. F. & S. De Hart	17	Raritan bay	.9	June 13, 1888	23
T. F. & S. De Hart	10	Raritan bay	.9	Feb. 6, 1888	25
T. F. & S. De Hart	14	Raritan bay	1.5	Feb. 6, 1888	38
T. F. & S. De Hart	149	Raritan bay	8.0	Mar. 11, 1890	2 00
T. F. & S. De Hart	145	Raritan bay	14.6	Mar. 11, 1890	3 65
Alfred Du Bois	72	Raritan bay	2.9	Feb. 6, 1888	73
Alfred Du Bois	415	Raritan bay	2.3	Mar. 11, 1890	58
R. C. Du Bois	71	Raritan bay	6.2	Mar. 5, 1888	1 55
Oscar L. Decker	37	Raritan bay	1.7	April 2, 1888	43
Almer Decker	18	Raritan bay	.5	Mar. 5, 1888	13
Almer Decker	52	Raritan bay	.8	Mar. 5, 1888	20
Almer Decker	724	Raritan bay	3.2	Feb. 10, 1891	80
Almer Decker	725	Raritan bay	3.8	May 12, 1891	95
De Hart & Housman	335	Raritan bay	1.3	Mar. 11, 1890	33
C. M. Decker	734	Raritan bay	1.5	April 12, 1892	38
F. C. Decker	127	Raritan bay	2.5	April 2, 1888	63
F. C. Decker	128	Raritan bay	2.8	Mar. 11, 1890	70
F. C. Decker	567	Raritan bay	4.0	Feb. 11, 1890	1 00
David Decker	686	Raritan bay	6.6	Mar. 12, 1891	1 65
J. & J. W. Elsworth Co	623	Raritan bay	3.9	Mar. 11, 1890	97
J. & J. W. Elsworth Co	621	Raritan bay	4.2	Mar. 11, 1890	1 05
J. & J. W. Elsworth Co	299	Raritan bay	3.8	May 14, 1889	95
J. & J. W. Elsworth Co	617	Raritan bay	11.7	Mar. 11, 1890	2 92
J. & J. W. Elsworth Co	645	Raritan bay	5.8	Feb. 11, 1890	1 45
J. & J. W. Elsworth Co	632	Raritan bay	24.7	Mar. 11, 1890	6 17
J. & J. W. Elsworth Co	619	Raritan bay	11.8	Feb. 11, 1890	2 95
J. & J. W. Elsworth Co	497	Raritan bay	3.4	Oct. 14, 1890	85
J. & J. W. Elsworth Co	495	Raritan bay	12.9	Oct. 14, 1890	3 23
J. & J. W. Elsworth Co	496	Raritan bay	6.1	Oct. 14, 1890	1 52
J. & J. W. Elsworth Co	443	Raritan bay	4.4	May 6, 1890	1 10
J. & J. W. Elsworth Co	441	Raritan bay	10.0	May 14, 1889	2 50
J. & J. W. Elsworth Co	148	Raritan bay	67.9	Aug. 13, 1889	16 97
J. & J. W. Elsworth Co	197	Raritan bay	10.0	Aug. 12, 1890	2 50
J. & J. W. Elsworth Co	701	Raritan bay	6.7	Mar. 12, 1891	1 67
J. & J. W. Elsworth Co	665	Raritan bay	4.9	Mar. 11, 1890	1 23
J. & J. W. Elsworth Co	742	Raritan bay	1.5	June 17, 1891	38
J. & J. W. Elsworth Co	855	Raritan bay	17.7	Feb. 11, 1892	4 42
J. & J. W. Elsworth Co	648	Raritan bay	5.6	May 12, 1891	1 40
J. & J. W. Elsworth Co	650	Raritan bay	11.9	Mar. 11, 1890	2 98
J. & J. W. Elsworth Co	124	Raritan bay	1.8	Mar. 5, 1888	45
J. & J. W. Elsworth Co	432	Raritan bay	3.4	Jan. 13, 1891	85

SCHEDULE "C"— (*Continued*)

NAME	Lot	Location	Acres	Franchise granted	Annual tax
J. & J. W. Elsworth Co	360	Raritan bay	6.5	Mar. 11, 1890	$1 63
J. & J. W. Elsworth Co	362	Raritan bay	1.1	Mar. 11, 1890	28
J. & J. W. Elsworth Co	786	Raritan bay	1.8	July 14, 1895	45
J. & J. W. Elsworth Co	305	Raritan bay	1.2	May 14, 1889	30
J. & J. W. Elsworth Co	680	Raritan bay	1.3	June 10, 1890	33
J. & J. W. Elsworth Co	501	Raritan bay	8.6	Feb. 11, 1890	2 15
J. & J. W. Elsworth Co	758	Raritan bay	3.1	July 14, 1891	78
J. & J. W. Elsworth Co	809	Raritan bay	1.4	July 14, 1891	35
J. & J. W. Elsworth Co	810	Raritan bay	1.4	July 14, 1891	35
J. & J. W. Elsworth Co	202	Raritan bay	4.6	May 14, 1889	1 15
J. & J. W. Elsworth Co	367	Raritan bay	4.3	May 14, 1889	1 08
J. & J. W. Elsworth Co	505	Raritan bay	6.1	Sept. 30, 1892	1 52
J. & J. W. Elsworth Co	172	Raritan bay	10.0	Mar. 11, 1890	2 50
J. & J. W. Elsworth Co	487	Raritan bay	21.2	Mar. 11, 1890	5 30
J. & J. W. Elsworth Co	692	Raritan bay	17.0	Jan. 12, 1892	4 25
J. & J. W. Elsworth Co	87	Raritan bay	2.7	Feb. 6, 1888	68
J. & J. W. Elsworth Co	785	Raritan bay	37.8	July 14, 1891	9 45
J. & J. W. Elsworth Co	556	Raritan bay	2.0	Feb. 11, 1890	50
J. & J. W. Elsworth Co	234	Raritan bay	2.0	May 14, 1889	50
J. & J. W. Elsworth Co	602	Raritan bay	1.7	Mar. 11, 1890	43
J. & J. W. Elsworth Co	631	Raritan bay	1.5	Feb. 11, 1890	38
J. & J. W. Elsworth Co	208	Raritan bay	1.6	Mar. 11, 1890	40
J. & J. W. Elsworth Co	625	Raritan bay	2.6	Feb. 11, 1890	65
J. & J. W. Elsworth Co	633	Raritan bay	2.0	Feb. 11, 1890	50
J. & J. W. Elsworth Co	269	Raritan bay	3.4	Nov. 12, 1889	85
J. & J. W. Elsworth Co	629	Raritan bay	1.4	Feb. 11, 1890	35
J. & J. W. Elsworth Co	273	Raritan bay	2.8	May 14, 1889	70
J. & J. W. Elsworth Co	618	Raritan bay	1.7	Mar. 11, 1890	43
J. & J. W. Elsworth Co	346	Raritan bay	11.7	June 10, 1889	2 93
J. & J. W. Elsworth Co	559	Raritan bay	5.4	Mar. 11, 1890	1 35
J. & J. W. Elsworth Co	534	Raritan bay	3.1	Feb. 11, 1890	78
J. & J. W. Elsworth Co	182	Raritan bay	2.4	May 14, 1899	60
J. & J. W. Elsworth Co	532	Raritan bay	2.15	Feb. 11, 1890	54
J. & J. W. Elsworth Co	184	Raritan bay	2.8	May 14, 1889	70
J. & J. W. Elsworth Co	634	Raritan bay	2.5	Mar. 11, 1890	63
J. & J. W. Elsworth Co	636	Raritan bay	6.8	Mar. 11, 1890	1 70
J. & J. W. Elsworth Co	638	Raritan bay	5.3	Mar. 11, 1890	1 32
J. & J. W. Elsworth Co	165	Raritan bay	28.2	May 14, 1889	7 05
J. & J. W. Elsworth Co	194	Raritan bay	6.0	Mar. 11, 1890	1 50

J. & J. W. Elsworth Co.	630	Raritan bay	1.7	Mar. 11, 1890	43
J. & J. W. Elsworth Co.	365	Raritan bay	7.7	Jan. 14, 1890	1 93
J. & J. W. Elsworth Co.	373	Raritan bay	4.6	May 14, 1889	1 15
J. & J. W. Elsworth Co.	363	Raritan bay	8.0	May 14, 1889	2 00
J. & J. W. Elsworth Co.	371	Raritan bay	5.1	May 14, 1889	1 28
J. & J. W. Elsworth Co.	369	Raritan bay	14.6	May 14, 1889	3 65
J. & J. W. Elsworth Co.	254	Raritan bay	11.1	Mar. 11, 1890	2 78
J. & J. W. Elsworth Co.	637	Raritan bay	1.7	Feb. 11, 1890	43
J. & J. W. Elsworth Co.	842	Raritan bay	8.2	Feb. 11, 1892	2 05
J. & J. W. Elsworth Co.	831	Raritan bay	3.2	Aug. 7, 1891	80
J. & J. W. Elsworth Co.	166	Raritan bay	5.9	Feb. 14, 1893	1 48
J. & J. W. Elsworth Co.	249	Raritan bay	5.0	Feb. 14, 1889	1 25
J. & J. W. Elsworth Co.	301	Raritan bay	3.6	Feb. 14, 1889	90
J. & J. W. Elsworth Co.	307	Raritan bay	5.6	Feb. 11, 1890	1 40
J. & J. W. Elsworth Co.	788	Raritan bay	1.8	May 14, 1891	45
J. & J. W. Elsworth Co.	105	Raritan bay	5.0	Jan. 4, 1888	1 25
J. & J. W. Elsworth Co.	313	Raritan bay	14.1	May 6, 1890	3 52
J. & J. W. Elsworth Co.	293	Raritan bay	2.8	May 14, 1889	70
J. & J. W. Elsworth Co.	26	Raritan bay	1.0	Nov. 7, 1888	25
J. & J. W. Elsworth Co.	142-A	Raritan bay	22.1	May 6, 1890	5 52
J. & J. W. Elsworth Co.	132	Raritan bay	12.6	Feb. 6, 1888	3 15
J. & J. W. Elsworth Co.	303	Raritan bay	2.2	Mar. 11, 1890	55
J. & J. W. Elsworth Co.	393	Raritan bay	3.4	Mar. 11, 1890	85
J. & J. W. Elsworth Co.	782	Raritan bay	1.8	July 14, 1891	45
J. & J. W. Elsworth Co.	517	Raritan bay	5.2	Feb. 11, 1890	1 30
J. & J. W. Elsworth Co.	811	Raritan bay	4.8	July 14, 1891	1 20
J. & J. W. Elsworth Co.	439	Raritan bay	4.0	May 14, 1889	1 00
J. & J. W. Elsworth Co.	554	Raritan bay	6.1	Feb. 11, 1890	1 52
J. & J. W. Elsworth Co.	215	Raritan bay	12.7	Mar. 11, 1890	3 19
J. & J. W. Elsworth Co.	775	Raritan bay	2.4	July 14, 1891	60
J. & J. W. Elsworth Co.	81	Raritan bay	1.3	Aug. 6, 1888	32
J. & J. W. Elsworth Co.	80	Raritan bay	2.4	Feb. 6, 1888	60
J. & J. W. Elsworth Co.	86	Raritan bay	4.3	Mar. 5, 1888	1 08
J. & J. W. Elsworth Co.	79	Raritan bay	1.3	Mar. 5, 1888	33
J. & J. W. Elsworth Co.	455-A	Raritan bay	.9	Mar. 11, 1889	23
J. & J. W. Elsworth Co.	285	Raritan bay	1.8	Aug. 13, 1889	45
J. & J. W. Elsworth Co.	84	Raritan bay	7.8	Nov. 7, 1888	1 95
J. & J. W. Elsworth Co.	85	Raritan bay	1.4	Nov. 7, 1888	35
J. & J. W. Elsworth Co.	295	Raritan bay	5.6	May 14, 1890	1 40
J. & J. W. Elsworth Co.	673	Raritan bay	1.8	Feb. 11, 1890	45
J. & J. W. Elsworth Co.	169	Raritan bay	1.6	May 14, 1889	40
J. & J. W. Elsworth Co.	111	Raritan bay	7.8	Nov. 12, 1889	1 95
J. & J. W. Elsworth Co.	82	Raritan bay	1.3	Nov. 7, 1888	33
J. & J. W. Elsworth Co.	297	Raritan bay	4.1	May 6, 1890	1 02
J. & J. W. Elsworth Co.	639	Raritan bay	5.8	Feb. 11, 1890	1 45
J. & J. W. Elsworth Co.	667	Raritan bay	3.4	Feb. 11, 1890	85
J. & J. W. Elsworth Co.	672	Raritan bay	1.1	June 10, 1890	28
J. & J. W. Elsworth Co.	755	Raritan bay	1.6	July 14, 1891	40

SCHEDULE "C"— (*Continued*)

NAME	Lot	Location	Acres	Franchise granted	Annual tax
J. & J. W. Elsworth Co	643	Raritan bay	6.8	Feb. 11, 1890	$1 70
J. & J. W. Elsworth Co	600	Raritan bay	3.8	Mar. 11, 1890	95
J. & J. W. Elsworth Co	729	Raritan bay	1.6	Mar. 18, 1891	40
J. & J. W. Elsworth Co	83	Raritan bay	2.8	Feb. 6, 1888	70
J. & J. W. Elsworth Co	787	Raritan bay	10.0	July 14, 1891	2 50
J. & J. W. Elsworth Co	647	Raritan bay	4.7	Feb. 11, 1890	1 18
J. & J. W. Elsworth Co	730	Raritan bay	2.4	Mar. 18, 1891	60
J. & J. W. Elsworth Co	641	Raritan bay	4.2	Feb. 11, 1890	1 05
J. & J. W. Elsworth Co	575	Raritan bay	9.6	Feb. 11, 1890	2 40
J. & J. W. Elsworth Co	364	Raritan bay	1.0	Mar. 11, 1890	25
J. & J. W. Elsworth Co	784	Raritan bay	1.6	Mar. 14, 1893	40
Elsworth & Polworth	376	Raritan bay	5.4	May 14, 1889	1 35
J. H. Elsworth	130	Raritan bay	7.2	Feb. 6, 1888	1 80
J. W. C. Englebrecht	599	Raritan bay	4.6	Mar. 11, 1890	1 15
J. W. C. Englebrecht	589	Raritan bay	3.7	Mar. 11, 1890	93
J. W. C. Englebrecht	591	Raritan bay	2.4	Mar. 11, 1890	60
Forrester & Hoag	347	Raritan bay	5.9	Aug. 13, 1889	1 48
Forrester & Hoag	353	Raritan bay	1.8	May 14, 1889	45
Forrester & Hoag	989	Raritan bay	10.2	July 14, 1891	2 55
Forrester & Hoag	801	Raritan bay	3.6	Jan. 12, 1892	90
Forrester & Hoag	669	Raritan bay	2.55	Mar. 11, 1890	64
Forrester & Hoag	874	Raritan bay	1.4	Feb. 14, 1893	35
Forrester & Hoag	873	Raritan bay	3.6	Feb. 14, 1893	90
Geo. E. Forrester	361	Raritan bay	1.6	Aug. 13, 1889	40
Geo. E. Forrester	359	Raritan bay	4.2	Aug. 13, 1889	1 05
Geo. E. Forrester	515	Raritan bay	1.2	Feb. 11, 1890	30
Geo. E. Forrester	517	Raritan bay	2.6	Feb. 11, 1890	65
Frazer & Houghwout	176	Raritan bay	14.8	May 14, 1889	3 70
Frazer & Houghwout	218	Raritan bay	7.0	Oct. 14, 1890	1 75
Frazer & Houghwout	783	Raritan bay	40.0	July 14, 1891	10 00
Frazer & Houghwout	504	Raritan bay	9.5	Aug. 9, 1892	2 38
Alexander C. Frazer	21	Raritan bay	.7	Jan. 4, 1888	18
A. L. Field	70	Long Island sound	11.8	Sept. 8, 1891	2 95
H. Fletcher Fordham	74	Long Island sound	69.0	Sept. 30, 1892	17 25
H. Fletcher Fordham	73	Long Island sound	69.0	Sept. 30, 1892	17 25
Daniel Green	798	Raritan bay	.6	July 14, 1891	15
Daniel Green	800	Raritan bay	2.6	July 14, 1891	65
Glenwood Oyster Co	Several	Long Island sound	240.0	Dec. 8, 1891	60 00
L. G. Griffing	13	Long Island sound	83.6	July 6, 1888	20 90

John S. Hoag	875	Raritan bay	.8	Feb. 14, 1893	20
Haviland & Odell	384	Raritan bay	7.5	July 9, 1889	1 88
Haviland & Odell	5-6-7	Little Neck bay	7.5	Jan. 8, 1889	1 88
Haviland & Odell	8	Little Neck bay	2.5	Jan. 8, 1889	63
Haviland & Odell	15	Little Neck bay	2.5	Jan. 8, 1889	63
W. H. Houghwout	486	Raritan bay	6.2	Jan. 14, 1890	1 55
W. H. Houghwout	512	Raritan bay	2.5	Mar. 11, 1890	63
W. H. Houghwout	694	Raritan bay	42.2	Jan. 27, 1891	10 55
Thomas W. Holbert	605	Raritan bay	1.8	Mar. 11, 1890	45
Thomas W. Holbert	607	Raritan bay	7.3	Mar. 11, 1890	1 83
Gould J. Jennings	128-A	Raritan bay	2.4	Mar. 11, 1890	60
Theodore Johnson	731	Raritan bay	.9	Dec. 8, 1891	23
Theodore Johnson	35	Raritan bay	.8	Dec. 8, 1891	20
Theodore Johnson	426	Raritan bay	.7	Mar. 11, 1890	18
Theodore Johnson	38	Raritan bay	.5	Feb. 12, 1889	13
Theodore Johnson	39	Raritan bay	.6	Nov. 8, 1888	15
Nelson Jacklin	774	Raritan bay	1.4	Feb. 11, 1890	35
Nelson Jacklin	790	Raritan bay	1.0	Feb. 11, 1890	25
Nelson Jacklin	556	Raritan bay	2.0	Feb. 11, 1890	50
Nelson Jacklin	546	Raritan bay	3.9	Feb. 11, 1890	98
Nelson Jacklin	828	Raritan bay	2.0	Feb. 11, 1890	50
Nelson Jacklin	192	Raritan bay	1.0	Mar. 11, 1890	25
John Journeay	88	Raritan bay	2.5	Nov. 7, 1888	63
Wm. Joline	70	Raritan bay	10.5	Mar. 5, 1888	2 63
David Joline	9	Raritan bay	1.3	Mar. 5, 1888	33
David Joline	330	Raritan bay	3.6	Mar. 11, 1890	90
David Joline	292	Raritan bay	4.9	Mar. 11, 1890	1 23
Frank Joline	300	Raritan bay	4.1	May 14, 1889	1 03
A. S. Joline	59	Raritan bay	4.1	Aug. 30, 1892	1 03
A. S. Joline	675	Raritan bay	5.2	Aug. 30, 1892	1 30
A. S. Joline	745	Raritan bay	10.0	Aug. 30, 1892	2 50
A. S. Joline	58	Raritan bay	11.4	Feb. 6, 1888	2 85
A. S. Joline	340	Raritan bay	1.6	Nov. 12, 1889	40
A. S. Joline	242	Raritan bay	6.3	Mar. 11, 1890	1 58
A. S. Joline	435	Raritan bay	5.3	Oct. 14, 1890	1 33
Heirs of B. Joline	290	Raritan bay	3.0	April 1, 1890	75
Henderson Journeay	595	Raritan bay	1.5	Feb. 11, 1890	38
Henderson Journeay	597	Raritan bay	2.7	Feb. 11, 1890	67
Jones & Burbank	502	Raritan bay	14.4	Mar. 11, 1890	3 60
Jones & Burbank	500	Raritan bay	40.0	Mar. 11, 1890	10 00
Jones & Burbank	510	Raritan bay	3.3	Mar. 11, 1890	83
Jones & Burbank	695	Raritan bay	19.6	Mar. 12, 1891	4 90
Thomas L. Jobes	579	Raritan bay	1.4	Feb. 11, 1890	35
Thomas L. Jobes	573	Raritan bay	1.2	Feb. 11, 1890	30
Thomas L. Jobes	581	Raritan bay	10.1	Feb. 11, 1890	2 53
Thomas L. Jobes	548	Raritan bay	3.5	Feb. 11, 1890	88
Thomas L. Jobes	550	Raritan bay	5.3	Feb. 11, 1890	1 33
Thomas L. Jobes	840	Raritan bay	1.6	Aug. 9, 1892	40

SCHEDULE "C"— (*Continued*)

NAME	Lot	Location	Acres	Franchise granted	Annual tax
David Johnson	167	Raritan bay	2.0	May 14, 1889	$0 50
David Johnson	262	Raritan bay	1.8	May 14, 1890	45
David Johnson	606	Raritan bay	2.2	Mar. 11, 1890	55
David Johnson	608	Raritan bay	2.6	Mar. 11, 1890	65
S. C., D. A. & M. L. Joline	857	Raritan bay	1.8	Feb. 11, 1892	45
Joline Bros	60	Raritan bay	4.8	Feb. 11, 1890	1 20
Joline Bros	343	Raritan bay	4.1	Oct. 14, 1890	1 02
Joseph L. Kerrigan	15	Long Island sound	197.8	Aug. 6, 1888	49 45
Joseph B. Kaiser	62	Raritan bay	2.6	Mar. 5, 1888	65
Joseph B. Kaiser	61	Raritan bay	2.9	Nov. 7, 1888	73
Joseph B. Kaiser	689	Raritan bay	5.3	Jan. 13, 1891	1 33
Clarence Lissenden	172	Raritan bay	5.0	Mar. 11, 1890	1 25
Elsworth B. Lewis	191	Raritan bay	.5	May 14, 1889	13
Elsworth B. Lewis	175	Raritan bay	1.5	May 14, 1889	38
Elsworth B. Lewis	189	Raritan bay	1.2	May 14, 1889	30
Elsworth B. Lewis	177	Raritan bay	1.6	May 14, 1889	40
Elsworth B. Lewis	181	Raritan bay	5.0	Aug. 12, 1890	1 25
Elsworth B. Lewis	682	Raritan bay	.8	Aug. 12, 1890	20
R. W. & W. W. La Forge	281	Raritan bay	5.6	May 14, 1889	1 40
R. W. La Forge	212	Raritan bay	1.5	Mar. 11, 1890	38
R. W. La Forge	143	Raritan bay	1.0	Feb. 14, 1893	25
W. W. LaForge	142-B	Raritan bay	3.5	Mar. 11, 1890	88
W. W. LaForge	123	Raritan bay	3.4	Aug. 9, 1892	85
W. W. LaForge	592	Raritan bay	1.6	Mar. 11, 1890	40
W. W. LaForge	596	Raritan bay	3.9	Mar. 11, 1890	97
W. W. LaForge	594	Raritan bay	1.5	Mar. 11, 1890	37
W. W. LaForge	872	Raritan bay	.8	Feb. 14, 1893	20
La Forge & Thompson	422½	Raritan bay	2.9	July 14, 1891	73
J. E. LaForge	358	Raritan bay	3.0	May 14, 1889	75
J. E. LaForge	366	Raritan bay	2.1	May 14, 1889	53
Abram Latourette	433	Raritan bay	13.0	May 14, 1889	3 25
Antoinette S. Lamb	32	Long Island sound	79.4	April 2, 1888	19 85
F. W. Lewis	13	Long Island sound	61.2	Nov. 7, 1888	15 30
Azel F. Merrell	430	Raritan bay	3.4	Mar. 11, 1890	85
Azel F. Merrell	278	Raritan bay	4.9	Mar. 11, 1890	1 23
Azel F. Merrell	428	Raritan bay	5.9	Mar. 11, 1890	1 48
Azel F. Merrell	159	Raritan bay	12.3	Mar. 11, 1890	3 08
Azel F. Merrell	494	Raritan bay	5.1	Oct. 14, 1890	1 28

Azel F. Merrell	118	Raritan bay	5.2	Feb. 6, 1888	1 30
Azel F. Merrell	434	Raritan bay	1.3	Mar. 11, 1890	33
Azel F. Merrell	266	Raritan bay	3.0	Mar. 11, 1890	75
Azel F. Merrell	485	Raritan bay	10.2	Jan. 14, 1890	2 55
Azel F. Merrell	437	Raritan bay	2.9	May 14, 1890	73
Azel F. Merrell	508	Raritan bay	6.0	Sept. 30, 1892	1 50
Azel F. Merrell	3	Raritan bay	5.1	Mar. 11, 1890	1 28
Azel F. Merrell	160	Raritan bay	11.1	Mar. 11, 1890	2 78
Azel F. Merrell	195	Raritan bay	8.5	May 14, 1889	2 13
Azel F. Merrell	161	Raritan bay	6.8	May 14, 1889	1 70
Azel F. Merrell	193	Raritan bay	11.9	May 14, 1889	2 98
Azel F. Merrell	282	Raritan bay	9.5	May 14, 1889	2 38
Azel F. Merrell	270	Raritan bay	8.8	May 14, 1889	2 20
Azel F. Merrell	280	Raritan bay	4.0	May 14, 1889	1 00
Azel F. Merrell	276	Raritan bay	22.8	May 14, 1889	5 70
Azel F. Merrell	674	Raritan bay	2.8	June 10, 1890	70
Azel F. Merrell	162	Raritan bay	17.5	Mar. 11, 1890	4 38
Azel F. Merrell	484	Raritan bay	3.4	Jan. 14, 1890	85
Azel F. Merrell	743	Raritan bay	.6	Feb. 11, 1892	15
Azel F. Merrell	168	Raritan bay	6.6	May 14, 1889	1 65
Azel F. Merrell	170	Raritan bay	6.0	May 14, 1889	1 50
Azel F. Merrell	863	Raritan bay	18.8	Feb. 14, 1893	4 70
Azel F. Merrell	864	Raritan bay	25.4	Dec. 29, 1892	6 35
Azel F. Merrell	877	Raritan bay	6.2	Feb. 14, 1893	1 55
Abram Martineau	8	Raritan bay	1.2	Nov. 8, 1888	30
Abram Martineau	385	Raritan bay	4.2	May 14, 1889	1 05
Abram Martineau	228	Raritan bay	9.0	July 9, 1889	2 25
Abram Martineau	377	Raritan bay	4.0	Mar. 11, 1890	1 00
Abram Martineau	506	Raritan bay	8.95	Mar. 11, 1890	2 24
Abram Martineau	230	Raritan bay	22.8	Dec. 29, 1892	5 70
Abram Martineau	865	Raritan bay	11.0	Dec. 29, 1892	2 75
E. P. Manee	63	Raritan bay	5.5	Jan. 4, 1888	1 38
George Marshall	231	Raritan bay	4.0	July 9, 1899	1 00
George Marshall	267	Raritan bay	6.8	Mar. 11, 1890	1 70
Marcellus T. Merrell	395	Raritan bay	5 2	July 9, 1899	1 30
Marcellus T. Merrell	397	Raritan bay	4.8	Mar. 11, 1890	1 20
John I. Merrell	460	Raritan bay	2.4	Feb. 11, 1890	60
John I. Merrell	474	Raritan bay	4.5	Feb. 11, 1890	1 13
John I. Merrell	475	Raritan bay	7.5	Feb. 11, 1890	1 88
John I. Merrell	476	Raritan bay	5.1	Feb. 11, 1890	1 28
John I. Merrell	352	Raritan bay	4.3	May 14, 1889	1 08
John I. Merrell	232	Raritan bay	12.0	Oct. 14, 1890	3 00
John I. Merrell	477	Raritan bay	12.5	Feb. 11, 1890	3 13
John I. Merrell	478	Raritan bay	13.2	Feb. 11, 1890	3 30
John I. Merrell	446	Raritan bay	.5	Mar. 11, 1890	13
John I. Merrell	833	Raritan bay	5.2	Mar. 12, 1891	1 30
John I. Merrell	524	Raritan bay	8.6	Mar. 11, 1890	2 15
John I. Merrell	258	Raritan bay	13.8	Mar. 12, 1889	3 45

SCHEDULE "C"— (*Continued*)

NAME	Lot	Location	Acres	Franchse granted	Annual tax
John I. Merrell	504	Raritan bay	9.5	Aug. 9, 1892	$2 37
Thomas S. Merrell	527	Raritan bay	5.1	Mar. 11, 1890	1 28
Thomas S. Merrell	525	Raritan bay	4.1	Mar. 11, 1890	1 03
Thomas S. Merrell	523	Raritan bay	.9	Mar. 11, 1890	23
Thomas S. Merrell	533	Raritan bay	5.4	Mar. 11, 1890	1 35
Thomas S. Merrell	535	Raritan bay	3.7	Mar. 11, 1890	93
Thomas S. Merrell	844	Raritan bay	3.0	Feb. 11, 1892	75
Thomas S. Merrell	693	Raritan bay	2.4	Mar. 12, 1891	60
Thomas S. Merrell	222	Raritan bay	14.8	Oct. 14, 1890	3 70
Thomas S. Merrell	148	Raritan bay	4.8	Aug. 13, 1889	1 20
Thomas S. Merrell	529	Raritan bay	16.1	Mar. 11, 1890	4 03
John D. Merrell	869	Raritan bay	1.8	Feb. 14, 1893	45
Henry S. Marshall	653	Raritan bay	7.9	Mar. 11, 1890	1 97
John Marshall	649	Raritan bay	3.8	Mar. 11, 1890	95
John Marshall	651	Raritan bay	3.6	Mar. 11, 1890	90
John Marshall	661	Raritan bay	1.9	Mar. 11, 1890	47
John Marshall	671	Raritan bay	4.95	Mar. 11, 1890	1 24
John Marshall	744	Raritan bay	4.0	July 14, 1891	1 00
John Marshall	746	Raritan bay	1.2	July 14, 1891	30
John Marshall	750	Raritan bay	2.8	July 14, 1891	70
Lillie Merrell	677	Raritan bay	2.0	June 10, 1890	50
Mersereau & Lewis	669	Raritan bay	2.55	Mar. 11, 1890	63
Wilbur N. Manee	156	Raritan bay	2.1	Sept. 4, 1888	53
Wilbur N. Manee	76	Raritan bay	2.1	Mar. 5, 1888	53
Wilbur N. Manee	452	Raritan bay	2.3	Feb. 11, 1890	58
J. J. Manee	658	Raritan bay	.4	Mar. 11, 1890	10
J. J. Manee	64	Raritan bay	4.0	Mar. 11, 1890	1 00
Abram & Wm. Manee	806	Raritan bay	3.4	July 14, 1891	85
Abram & Wm. Manee	814	Raritan bay	6.6	July 14, 1891	1 65
Abram & Wm. Manee	816	Raritan bay	3.0	July 14, 1891	75
Abram & Wm. Manee	819	Raritan bay	4.4	July 14, 1891	1 10
Abram & Wm. Manee	832	Raritan bay	1.1	Aug. 7, 1891	28
Abram Manee	461	Raritan bay	2.0	May 12, 1891	50
Abram Manee	808	Raritan bay	4.4	July 14, 1891	1 10
Abram Manee	815	Raritan bay	4.8	July 14, 1891	1 20
Abram Manee	817	Raritan bay	2.0	July 14, 1891	50
Marshall & Bedell	772	Raritan bay	2.3	Jan. 12, 1892	58
George H. Manee	542	Raritan bay	1.3	Feb. 11, 1890	33

New York Oyster Co	467	Raritan bay	4.15	Jan. 14, 1890	1 03
New York Oyster Co	622	Raritan bay	16.9	Mar. 11, 1890	4 23
New York Oyster Co	565	Raritan bay	2.5	Mar. 11, 1890	63
New York Oyster Co	549	Raritan bay	2.6	Mar. 11, 1890	65
New York Oyster Co	604	Raritan bay	1.4	Mar. 11, 1890	35
George Newbury	635	Raritan bay	1.2	Feb. 11, 1890	30
D. O. Noe & Son	27	Raritan bay	1.4	Oct. 14, 1890	35
D. O. Noe & Son	32	Raritan bay	.7	Oct. 14, 1890	17
D. O. Noe & Son	43	Raritan bay	3.0	Oct. 14, 1890	75
D. O. Noe & Son	151	Raritan bay	.7	Oct. 14, 1890	17
D. O. Noe & Son	150	Raritan bay	.7	Oct. 18, 1890	18
D. O. Noe & Son	23	Raritan bay	.8	Nov. 7, 1889	20
D. O. Noe & Son	503	Raritan bay	8.1	Feb. 11, 1890	2 03
D. O. Noe & Son	805	Raritan bay	9.6	Mar. 12, 1891	2 40
D. O. Noe & Son	5	Raritan bay	5.7	Nov. 7, 1888	1 42
J. E. Noe	33	Raritan bay	.9	Mar. 5, 1888	23
J. E. Noe	713	Raritan bay	2.0	Feb. 10, 1891	50
New York Fishing Club	67	Raritan bay	5.3	June 10, 1890	1 33
Northport Oyster Co	Several	Long Island sound	65.0	Mar. 14, 1893	16 25
Polworth & Elsworth	245	Raritan bay	3.6	May 14, 1889	90
Polworth & Elsworth	157	Raritan bay	8.3	May 14, 1889	2 07
Polworth & Elsworth	243	Raritan bay	7.0	May 14, 1889	1 75
Polworth & Elsworth	247	Raritan bay	6.5	May 14, 1889	1 63
Polworth & Elsworth	233	Raritan bay	11.0	May 14, 1889	2 75
Polworth & Elsworth	436	Raritan bay	4.3	Mar. 11, 1890	1 07
Polworth & Elsworth	511	Raritan bay	13.5	Mar. 11, 1890	3 37
Polworth & Elsworth	513	Raritan bay	2.3	Mar. 11, 1890	58
Polworth & Elsworth	438	Raritan bay	8.0	Mar. 11, 1890	2 00
Polworth & Elsworth	235	Raritan bay	6.4	Mar. 11, 1890	1 60
Polworth & Elsworth	237	Raritan bay	14.4	Mar. 11, 1890	3 60
Polworth & Elsworth	239	Raritan bay	20.5	Mar. 11, 1890	5 12
Polworth & Elsworth	251	Raritan bay	2.6	May 6, 1890	65
Polworth & Elsworth	558	Raritan bay	5.5	Feb. 11, 1890	1 38
Polworth & Elsworth	628	Raritan bay	1.1	Mar. 11, 1890	28
Polworth & Elsworth	463	Raritan bay	2.0	Mar. 11, 1890	50
Polworth & Elsworth	133	Raritan bay	1.9	May 6, 1890	48
Polworth & Elsworth	372	Raritan bay	2.0	May 14, 1889	50
Polworth & Elsworth	657	Raritan bay	1.8	Mar. 11, 1890	45
Polworth & Elsworth	659	Raritan bay	4.0	Mar. 11, 1890	1 00
Polworth & Elsworth	603	Raritan bay	2.5	Mar. 11, 1890	63
Nils Pederson	134	Raritan bay	4.3	Mar. 5, 1888	1 07
David Price	110	Raritan bay	1.0	Nov. 7, 1888	25
David Price	30	Raritan bay	1.8	Nov. 7, 1888	45
Elmer Price	6	Raritan bay	1.0	Mar. 5, 1888	25
Elmer Price	140-A	Raritan bay	3.3	Nov. 7, 1888	83
Elmer Price	274	Raritan bay	1.8	Nov. 7, 1888	45
Elmer Price	260	Raritan bay	3.0	Aug. 13, 1889	75
Elmer Price	264	Raritan bay	1.2	May 14, 1889	30

SCHEDULE "C"— (*Continued*)

NAME	Lot	Location	Acres	Franchise granted	Annual tax
Elmer Price	268	Raritan bay	1.6	Mar. 11, 1890	$0 40
Elmer Price	250	Raritan bay	1.5	Mar. 11, 1890	38
Elmer Price	244	Raritan bay	.8	Mar. 11, 1890	20
Elmer Price	272	Raritan bay	2.0	May 6, 1890	50
Elmer Price	712	Raritan bay	1.4	May 12, 1891	35
John H. Price	196	Raritan bay	1.1	May 14, 1889	27
John H. Price	198	Raritan bay	2.0	May 14, 1889	50
E. M. Post	526	Raritan bay	4.0	Mar. 11, 1890	1 00
E. M. Post	520	Raritan bay	6.5	Mar. 11, 1890	1 63
E. M. Post	516	Raritan bay	7.5	Mar. 11, 1890	1 87
E. M. Post	514	Raritan bay	3.1	Mar. 11, 1890	78
Chas. E. Palmer & Son	Several	Long Island sound	250.0	Dec. 8, 1899	62 50
Chas. E. Palmer & Son	Several	Long Island sound	58.0	Dec. 8, 1899	14 50
Chas. E. Palmer & Son	671	Raritan bay	4.95	Mar. 11, 1890	1 23
C. E., C. F. & H. Palmer	859	Raritan bay	64.8	Aug. 9, 1892	16 20
Croel B. Price	710	Raritan bay	2.0	Feb. 10, 1899	50
Croel B. Price	711	Raritan bay	.5	Feb. 10, 1899	13
Croel B. Price	738	Raritan bay	3.0	July 14, 1899	75
Croel B. Price	48	Raritan bay	3.4	Feb. 6, 1888	85
Price & Merrell	4	Raritan bay	4.6	April 2, 1888	1 15
Purity Blue Point Oyster Co	Several	Long Island sound	240.0	Dec. 29, 1892	60 00
Wm. C. Porth	329	Raritan bay	14.5	Mar. 11, 1890	3 63
Wm. C. Porth	323	Raritan bay	13.8	July 9, 1889	3 45
Wm. C. Porth	325	Raritan bay	8.0	July 9, 1889	2 00
Wm. C. Porth	319	Raritan bay	5.0	May 14, 1889	1 25
Wm. C. Porth	333	Raritan bay	1.5	Mar. 11, 1890	37
Wm. C. Porth	843	Raritan bay	4.6	Feb. 11, 1892	1 15
Wm. C. Porth	321	Raritan bay	3.2	July 9, 1889	80
Wm. C. Porth	331	Raritan bay	5.2	July 9, 1889	1 30
Wm. C. Porth	327	Raritan bay	5.0	May 14, 1889	1 25
Wm. C. Porth	412	Raritan bay	2.5	July 9, 1890	63
Wm. C. Porth	779	Raritan bay	26.4	July 14, 1891	6 60
Wm. C. Porth	408	Raritan bay	5.0	Aug. 7, 1891	1 25
Wm. C. Porth	781	Raritan bay	42.8	Dec. 29, 1892	10 70
Pausch Bros. Oyster Co	12	Long Island sound	213.2	Nov. 7, 1888	53 30
Pausch Bros. Oyster Co	13	Long Island sound	68.4	Nov. 7, 1888	17 10
Pausch Bros. Oyster Co	Several	Long Island sound	67.0	Dec. 8, 1891	16 75

Radel Oyster Co	5	Long Island sound	171.2	Dec. 11, 1888	42 80
Radel Oyster Co	7	Long Island sound	235.2	Nov. 7, 1888	58 80
Radel Oyster Co	4	Long Island sound	101.3	Jan. 8, 1889	25 33
Radel Oyster Co	6	Long Island sound	146.4	Nov. 7, 1888	36 60
Andrew Radel	3	Long Island sound	173.5	Nov. 7, 1888	43 38
Andrew Radel	75	Long Island sound	104.6	Sept. 30, 1892	26 15
Andrew Radel	76	Long Island sound	104.2	Sept. 30, 1892	26 05
Andrew Radel	77	Long Island sound	104.0	Sept. 30, 1892	26 00
Andrew Radel	78	Long Island sound	104.0	Dec. 29, 1892	26 00
Andrew Radel	99	Long Island sound	104.0	Sept. 11, 1900	26 00
Andrew Radel	98	Long Island sound	104.0	Sept. 11, 1900	26 00
Frank Rogers	36	Long Island sound	110.4	Nov. 7, 1888	27 60
Frank Rogers	37	Long Island sound	98.0	Nov. 7, 1888	24 50
Frank Rogers	35	Long Island sound	139.0	Nov. 7, 1888	34 75
Frank Rogers	103	Smithtown bay	29.8	Aug. 13, 1901	7 45
Geo. M. Still, Inc	284	Raritan bay	6.6	May 14, 1889	1 65
Geo. M. Still, Inc	171	Raritan bay	12.8	May 14, 1889	3 20
Geo. M. Still, Inc	824	Raritan bay	3.2	Aug. 7, 1891	80
Geo. M. Still, Inc	660	Raritan bay	2.1	Mar. 11, 1890	53
Geo. M. Still, Inc	521	Raritan bay	2.7	June 10, 1890	67
Geo. M. Still, Inc	442	Raritan bay	2.1	Jan. 14, 1890	53
Geo. M. Still, Inc	411	Raritan bay	5.4	Mar. 11, 1890	1 35
Geo. M. Still, Inc	401	Raritan bay	3.0	Mar. 11, 1890	75
Geo. M. Still, Inc	805	Raritan bay	10.6	July 14, 1891	2 65
Geo. M. Still, Inc	253	Raritan bay	2.6	May 14, 1889	65
Geo. M. Still, Inc	823	Raritan bay	2.4	Aug. 7, 1891	60
Geo. M. Still, Inc	440	Raritan bay	1.4	Jan. 14, 1890	35
Thomas Silk	613	Raritan bay	.9	Mar. 11, 1890	23
F. T. Sprague	409	Raritan bay	2.5	Mar. 11, 1890	63
F. T. Sprague	413	Raritan bay	2.4	Mar. 11, 1890	60
John S. Sleight	715	Raritan bay	5.8	Jan. 27, 1891	1 45
R. Lawrence Smith	29	Long Island sound	74.8	April 2, 1888	18 70
R. Lawrence Smith	33	Long Island sound	78.7	April 2, 1888	19 67
E. Marshall Smith	30	Long Island sound	75.6	April 2, 1888	18 90
E. Marshall Smith	31	Long Island sound	73.2	April 2, 1888	18 30
E. J. Still	69	Raritan bay	2.2	Mar. 5, 1888	55
E. J. Still	66	Raritan bay	2.0	Nov. 7, 1888	50
E. J. Still	341	Raritan bay	2.2	Oct. 14, 1890	55
E. J. Still	68	Raritan bay	.8	Mar. 11, 1890	20
Sterling Oyster Co	Several	Long Island sound	210.0	Dec. 8, 1891	52 50
Sterling Oyster Co	Several	Long Island sound	34.2	Jan. 12, 1892	8 55
Sealshipt Oyster System	9	Smithtown bay	106.6	Jan. 4, 1888	26 65
Sealshipt Oyster System	10	Smithtown bay	106.1	April 2, 1888	26 53
Sealshipt Oyster System	8	Smithtown bay	106.4	April 2, 1888	26 60
Sealshipt Oyster System	7	Smithtown bay	107.8	April 2, 1888	26 95
Sealshipt Oyster System	6	Smithtown bay	108.9	April 2, 1888	27 23
Sealshipt Oyster System	5	Smithtown bay	109.5	April 2, 1888	27 38
Sealshipt Oyster System	4	Smithtown bay	110.2	April 2, 1888	27 55

SCHEDULE "C"— (*Continued*)

NAME	Lot	Location	Acres	Franchise granted	Annual tax
Sealshipt Oyster System	3	Smithtown bay	105.0	April 2, 1888	$26 25
Sealshipt Oyster System	2	Smithtown bay	112.8	April 2, 1888	28 20
Sealshipt Oyster System	1	Smithtown bay	113.2	April 2, 1888	28 30
Sealshipt Oyster System	28	Long Island sound	76.2	April 2, 1888	19 05
Sealshipt Oyster System	27	Long Island sound	193.5	Nov. 7, 1888	48 38
Sealshipt Oyster System	Section C	Long Island sound	250.0	July 6, 1888	62 50
Sealshipt Oyster System	Several	Long Island sound	100.0	Jan. 12, 1889	25 00
Sealshipt Oyster System	Several	Long Island sound	100.0	Oct. 1, 1888	25 00
Sealshipt Oyster System	20	Long Island sound	249.6	Nov. 7, 1888	62 40
Sealshipt Oyster System	19	Long Island sound	249.0	May 14, 1889	62 25
Sealshipt Oyster System	22	Long Island sound	58.9	Nov. 7, 1888	14 72
Sealshipt Oyster System	21	Long Island sound	74.5	Nov. 7, 1888	18 63
Sealshipt Oyster System	18	Long Island sound	249.0	Nov. 7, 1888	62 25
Sealshipt Oyster System	40	Long Island sound	46.3	Nov. 7, 1888	11 57
Sealshipt Oyster System	26	Long Island sound	115.7	April 2, 1888	28 93
Sealshipt Oyster System	787	Raritan bay	6.6	July 14, 1891	1 65
Sealshipt Oyster System	498	Raritan bay	9.5	Oct. 14, 1890	2 37
Sealshipt Oyster System	259	Raritan bay	6.6	Aug. 13, 1889	1 65
Sealshipt Oyster System	354	Raritan bay	1.9	Nov. 12, 1889	48
Sealshipt Oyster System	490	Raritan bay	9.8	Oct. 14, 1890	2 45
Sealshipt Oyster System	463	Raritan bay	6.6	Mar. 11, 1890	1 65
Sealshipt Oyster System	Several	Long Island sound	150.0	Dec. 29, 1892	37 50
Sealshipt Oyster System	Several	Long Island sound	250.0	Mar. 14, 1893	62 50
Sealshipt Oyster System	Several	Long Island sound	250.0	Mar. 14, 1893	62 50
Sealshipt Oyster System	Several	Long Island sound	260.0	Nov. 7, 1892	65 00
Sealshipt Oyster System	891	Raritan bay	151.2	Oct. 7, 1897	37 80
Sealshipt Oyster System	Several	Long Island sound	80.0	Nov. 15, 1898	20 00
Sealshipt Oyster System	Several	Long Island sound	80.0	Nov. 15, 1898	20 00
Sealshipt Oyster System	Several	Long Island sound	80.0	Dec. 20, 1898	20 00
Sealshipt Oyster System	Several	Long Island sound	150.0	Nov. 15, 1898	37 50
Sealshipt Oyster System	Several	Long Island sound	240.0	Nov. 15, 1898	60 00
Sealshipt Oyster System	Several	Long Island sound	70.0	Nov. 15, 1898	17 50
Sealshipt Oyster System	88	Long Island sound	128.2	Mar. 27, 1900	32 05
C. S. Sofield	34	Raritan bay	.7	Jan. 4, 1888	17
C. S. Sofield	28	Raritan bay	.6	Jan. 4, 1888	15
Suwasset Oyster Co	101	Long Island sound	167.4	Sept. 11, 1900	41 85
Suwasset Oyster Co	100	Long Island sound	104.0	Sept. 11, 1900	26 00
Suwasset Oyster Co	102	Long Island sound	200.0	Nov. 13, 1900	50 00

Suwasset Oyster Co	72	Long Island sound	99.2	Sept. 30, 1892	24 80
A. C. Sofield	46	Raritan bay	.7	Mar. 11, 1890	17
A. C. Sofield	24	Raritan bay	.8	Mar. 11, 1890	20
John M. Sleight	129	Raritan bay	1.1	Jan. 4, 1888	28
John M. Sleight	125	Raritan bay	11.9	Mar. 5, 1888	2 97
J. & B. K. Simonson	51	Raritan bay	1.4	Feb. 6, 1888	35
J. & B. K. Simonson	49	Rariton bay	1.8	Mar. 5, 1888	45
S. B. Sprague	65	Raritan bay	5.2	Feb. 6, 1888	1 30
C. O. Sprague	355	Raritan bay	2.5	May 14, 1889	63
C. O. Sprague	286	Raritan bay	1.7	May 14, 1889	43
A. W. Sharrett	488	Raritan bay	4.5	Jan. 14, 1890	1 12
A. W. Sharrett	506	Raritan bay	8.95	Mar. 11, 1890	2 24
A. W. Sharrett	683	Raritan bay	3.6	Jan. 27, 1891	90
A. W. Sharrett	656	Raritan bay	13.2	Mar. 14, 1893	3 30
Standard Oyster Co	186	Raritan bay	5.1	May 14, 1889	1 28
Standard Oyster Co	226	Raritan bay	18.0	Oct. 14, 1890	4 50
Standard Oyster Co	240	Raritan bay	3.2	Oct. 14, 1890	80
Standard Oyster Co	654	Raritan bay	8.2	Oct. 14, 1890	2 05
Standard Oyster Co	216	Raritan Bay	12.6	Oct. 14, 1890	3 15
Standard Oyster Co	172	Raritan bay	9.3	Mar. 11, 1890	2 33
Standard Oyster Co	256	Raritan bay	25.3	Mar. 11, 1890	6 32
Standard Oyster Co	73	Raritan bay	3.8	Mar. 5, 1888	95
Standard Oyster Co	53	Raritan bay	6.8	Mar. 5, 1888	1 70
Standard Oyster Co	483	Raritan bay	2.4	Oct. 14, 1890	60
Standard Oyster Co	492	Raritan bay	5.9	Oct. 14, 1890	1 48
Standard Oyster Co	499	Raritan bay	5.8	Oct. 14, 1890	1 45
Standard Oyster Co	74	Raritan bay	6.6	Feb. 6, 1888	1 65
Standard Oyster Co	41	Raritan bay	.5	Nov. 7, 1888	13
Standard Oyster Co	40	Raritan bay	.4	Feb. 14, 1893	10
Standard Oyster Co	856	Raritan bay	5.8	Dec. 8, 1891	1 45
Standard Oyster Co	174	Raritan bay	18.4	May 14, 1889	4 60
Standard Oyster Co	147	Raritan bay	37.6	May 14, 1889	9 40
Standard Oyster Co	493	Raritan bay	9.8	Oct. 14, 1890	2 45
Standard Oyster Co	676	Raritan bay	167.0	Feb. 10, 1891	41 75
Standard Oyster Co	Section B	Long Island sound	250.0	Sept. 4, 1888	62 50
Standard Oyster Co	252	Raritan bay	20.0	Mar. 11, 1890	5 00
Standard Oyster Co	479	Raritan bay	8.6	June 10, 1890	2 15
Standard Oyster Co	860	Raritan bay	11.2	Dec. 29, 1892	2 80
Standard Oyster Co	238	Raritan bay	29.4	Aug. 12, 1890	7 35
W. W. Smith	67	Long Island sound	12.3	July 9, 1899	3 08
Geo. H. Sharrett	486	Raritan bay	6.2	Jan. 14, 1890	1 55
Bertha Sharrett	148	Raritan bay	4.2	Aug. 13, 1889	1 05
Steinmire & Fisher	348	Raritan bay	9.6	May 14, 1889	2 40
Steinmire & Fisher	342	Raritan bay	5.0	Nov. 12, 1889	1 25
David Simonson	822	Raritan bay	2.8	Aug. 7, 1889	70
David Simonson	825	Raritan bay	1.4	Aug. 7, 1891	35
George E. Sprague	751	Raritan bay	1.0	July 14, 1891	25
Charles B. Sprague	749	Raritan bay	1.9	July 14, 1891	48

SCHEDULE "C"— (*Concluded*)

NAME	Lot	Location	Acres	Franchise granted	Annual tax
Charles B. Sprague	753	Raritan bay	1.4	July 14, 1891	$0 35
Geo. W. Sanbeg	522	Raritan bay	4.2	Mar. 14, 1890	1 05
Wesley Thompson	126	Raritan bay	5.8	Feb. 6, 1888	1 45
Wesley Thompson	642	Raritan bay	3.7	Mar. 11, 1890	93
Wesley Thompson	640	Raritan bay	2.1	Mar. 11, 1890	52
Wesley Thompson	776	Raritan bay	4.6	July 14, 1891	1 15
John H. Vanderveer	Several	Long Island sound	110.0	Oct. 13, 1891	27 50
John H. Vanderveer	Several	Long Island sound	120.0	Mar. 18, 1891	30 00
Charles H. Vroom	Several	Long Island sound	85.8	Jan. 12, 1892	21 45
Henry Van Name	56	Raritan bay	5.6	Feb. 6, 1888	1 40
M. & P. M. Van Name	12	Raritan bay	6.6	Jan. 4, 1888	1 65
M. & P. M. Van Name	12½	Raritan bay	.4	Mar. 12, 1889	10
David W. Van Name	55	Raritan bay	5.2	Mar. 11, 1890	1 30
David W. Van Name	697	Raritan bay	1.3	Mar. 12, 1891	32
John M. Van Wyck	398	Raritan bay	3.2	Mar. 14, 1892	80
Christian Walle	279	Raritan bay	2.2	May 14, 1889	55
Christian Walle	394	Raritan bay	2.2	Feb. 11, 1892	55
Christian Walle	679	Raritan bay	4.7	June 10, 1890	1 18
Christian Walle	626	Raritan bay	1.5	Mar. 11, 1890	38
Christian Walle	396	Raritan bay	1.1	Mar. 11, 1890	28
George T. Woglam	20	Raritan bay	3.7	Nov. 7, 1888	92
J. C. Wynant	765	Raritan bay	.8	Feb. 10, 1891	20
Fred Wagner	431	Raritan bay	3.5	May 14, 1890	88
G. P. Wright & Son	491	Raritan bay	1.5	Oct. 14, 1890	38
Abram Woglam	769	Raritan bay	1.7	Feb. 11, 1892	42
Abram Woglam	777	Raritan bay	1.9	Aug. 7, 1891	47
Mrs. Chas. Zeigler	414½	Raritan bay	2.15	Nov. 12, 1889	54
Mrs. Chas. Zeigler	416	Raritan bay	2.3	Nov. 12, 1889	58
Mrs. Chas. Zeigler	422	Raritan bay	2.9	June 10, 1890	73
Total	.....	.....	15,912.05	.....	$3,978 70

FRANCHISES ASSIGNED TO THE STATE OF NEW YORK DURING FISCAL YEAR ENDING SEPTEMBER 30, 1914

Lot	Location	Name	Acres
160	Raritan bay	David Johnson	1.1
134	Raritan bay	Nils Pederson	4.3
733	Raritan bay	Peter Cannon	.2
735	Raritan bay	Andrew M. Cannon	2.2
45	Raritan bay	Andrew M. Cannon	.7
37	Raritan bay	Oscar L. Decker	1.7
815	Raritan bay	Abram Manee	4.8
Total			15.0

LEASES ASSIGNED TO THE STATE OF NEW YORK DURING FISCAL YEAR ENDING SEPTEMBER 30, 1914

Lot	Location	Name	Acres
Sec. B, 121	Long Island Sound	John C. Allen	22.0
990	Raritan bay	Pausch Bros. Oyster Co	100.0
989	Raritan bay	Pausch Bros. Oyster Co	200.0
Sec. A, 121	Long Island Sound	Elbert H. Mackey	25.2
1	Hudson river	New York Oyster Co	400.7
239	Long Island Sound	Wm. Ruddock	6.0
311	Long Island Sound	Rudolph Merrell	108.0
316	Long Island Sound	Azel F. Merrell	57.0
Several	Long Island Sound	Ferdinand F. Downs	60.0
Several	Long Island Sound	Mills & Ronik	65.0
3	Hempstead Harbor	Merrell & Bayles	5.6
313	Long Island Sound	Azel F. Merrell	126.0
126	Long Island Sound	Azel F. Merrell	33.6
312	Long Island Sound	Azel F. Merrell	159.4
118	Long Island Sound	Howard Gould	25.6
117	Long Island Sound	Howard Gould	106.0
Total			1,500.1

UNPAID TAXES FOR THE YEAR 1913

NAME	Lot	Location	Tax	Penalty
William H. Abrams	280	Jamaica bay	$0 35	$0 07
William H. Abrams	244	Jamaica bay	35	07
William H. Abrams	240	Jamaica bay	10	02
Charles Bedell	767	Raritan bay	83	.....
John M. Bell	269	East Chester bay	2 40	48
John M. Bell	268	Long Island sound	1 70	34
Oswald T. Bergen	272	Long Island sound	2 80	56
C. Josephine Biggs	149	Jamaica bay	40	.....
C. Josephine Biggs	144	Jamaica bay	75	.....
C. Josephine Biggs	524	Jamaica bay	1 00	.....
C. Josephine Biggs	150	Jamaica bay	1 80	.....
C. Josephine Biggs	151	Jamaica bay	15	.....
Peter Cannon	733	Raritan bay	05	01
A. M. Cannon	45	Raritan bay	18	04
A. M. Cannon	735	Raritan bay	55	11
Geo. E. Call	41	Long Island sound	18 73	3 75
Nathaniel Carman	492	Jamaica bay	1 45	28
Nathaniel Carman	116	Jamaica bay	15	03
Nathaniel Carman	115	Jamaica bay	60	12
E. F. Colon	951	Raritan bay	2 30	.....
E. F. Colon	952	Raritan bay	40	.....
Bernard Collins	264	Long Island sound	40	08
Bernard Collins	233	East Chester bay	70	14
Crocker & Allen	93	Long Island sound	3 88	78
Oscar L. Decker	37	Raritan bay	43	09
Dennis Dougherty	286	East Chester bay	1 45	29
Dennis Dougherty	288	East Chester bay	2 65	53
Henry W. Davis	343	Jamaica bay	2 65	53
Henry W. Davis	506	Jamaica bay	1 40	28
Henry W. Davis	329	Jamaica bay	1 85	37
W. R. Fordham	263	Pelham bay	35	07
W. R. Fordham	262	Pelham bay	1 60	32
W. R. Fordham	261	Pelham bay	1 55	31
J. O. Fordham	229	Pelham bay	4 55	.....
J. O. Fordham	232	Pelham bay	2 80	.....
J. O. Fordham	305	Pelham bay	1 15	.....
J. O. Fordham	231	Pelham bay	1 45	.....
J. O. Fordham	236	Pelham bay	3 25	.....
J. O. Fordham	97	Long Island sound	16 55	.....
W. S. Ford	179	Jamaica bay	1 10	.....
J. B. Glasier	248	Long Island sound	45	.....
Thomas W. Holbert	605	Raritan bay	45	09
Thomas W. Holbert	607	Raritan bay	1 83	37
John Hanson	34	Jamaica bay	70	14
John Hanson	69	Jamaica bay	5 05	1 01
John Hanson	71	Jamaica bay	70	14
Daniel F. Huffmire	264	Jamaica bay	40	08
L. L. Huffmire	262	Jamaica bay	3 10	62
L. L. Huffmire	265	Jamaica bay	35	07
L. L. Huffmire	263	Jamaica bay	1 35	27
O. & H. Housman	324	Long Island sound	25 00	5 00
Adolph Johnson	Several	Long Island sound	22 18	.....
Jos. B. Kasier	62	Raritan bay	65	13
Jos. B. Kasier	61	Raritan bay	73	15
Jos. B. Kasier	689	Raritan bay	1 33	27
Antoinette S. Lamb	32	Long Island sound	19 85	.....
Fred Lundy	322	Long Island sound	5 25	1 05
Cornelius Leary	12	Hempstead harbor	55	11
Lucretia B. Morey	940	Raritan bay	43	09
Monroe & Remsen	464	Jamaica bay	1 50	30
William H. Morris	276	East Chester bay	65	13
John H. McCrodden	517	Jamaica bay	1 15	22
Chas. McCrodden	606	Jamaica bay	2 25	44
Nils Pederson	134	Raritan bay	1 07	20
David Price	110	Raritan bay	25	05
David Price	30	Raritan bay	45	09
Elmer Price	6	Raritan bay	25	05
Elmer Price	140-A	Raritan bay	83	16
Elmer Price	274	Raritan bay	45	09
Elmer Price	264	Raritan bay	30	06
Elmer Price	268	Raritan bay	40	08
Elmer Price	272	Raritan bay	50	10
Price & Merrell	4	Raritan bay	1 15	23

UNPAID TAXES FOR THE YEAR 1913 — (*Concluded*)

NAME	Lot	Location	Tax	Penalty
John Price, Jr	244	East Chester bay	$6 20	.....
Wm. R. Rhinehart	635	Jamaica bay	70	$0 14
Wm. R. Rhinehart	636	Jamaica bay	80	16
Thomas Remsen	473	Jamaica bay	2 00	40
Rockaway Oyster Co	516	Jamaica bay	1 80	36
Rockaway Oyster Co	480	Jamaica bay	85	16
Rockaway Oyster Co	481	Jamaica bay	80	16
Rockaway Oyster Co	219	Jamaica bay	1 70	34
Rockaway Oyster Co	224	Jamaica bay	50	10
Rockaway Oyster Co	282	Jamaica bay	1 90	38
Rockaway Oyster Co	84	Jamaica bay	75	14
Rockaway Oyster Co	332	Jamaica bay	1 45	28
Rockaway Oyster Co	85	Jamaica bay	45	09
Rockaway Oyster Co	80	Jamaica bay	1 10	22
Rockaway Oyster Co	79	Jamaica bay	45	09
Rockaway Oyster Co	158	Jamaica bay	1 65	32
Rockaway Oyster Co	622	Jamaica bay	2 90	58
Rockaway Oyster Co	135	Jamaica bay	1 05	20
Rockaway Oyster Co	229	Jamaica bay	2 60	52
Rockaway Oyster Co	82	Jamaica bay	1 45	28
Rockaway Oyster Co	83	Jamaica bay	1 25	24
Rockaway Oyster Co	136	Jamaica bay	1 00	20
F. T. Sprague	409	Raritan bay	63	13
F. T. Sprague	413	Raritan bay	60	12
John S. Sleight	715	Raritan bay	1 45	28
R. Lawrence Smith	29	Long Island sound	18 70	3 74
R. Lawrence Smith	33	Long Island sound	19 67	3 93
E. Marshall Smith	30	Long Island sound	18 90	3 78
E. Marshall Smith	31	Long Island sound	18 30	3 66
S. B. Sprague	65	Raritan bay	1 30	26
David Simonson	822	Raritan bay	70	14
David Simonson	825	Raritan bay	35	07
Ezra Sprague	375	Jamaica bay	30	06
Ezra Sprague	433-A	Jamaica bay	40	08
Ezra Sprague	433-B	Jamaica bay	40	08
Ezra Sprague	434	Jamaica bay	60	12
Ezra & Theodore Sprague	451	Jamaica bay	1 30	26
Ezra & Theodore Sprague	450	Jamaica bay	1 45	29
Ezra & Theodore Sprague	366	Jamaica bay	30	06
Ezra & Theodore Sprague	454	Jamaica bay	2 25	45
Geo. T. Soper	413	Jamaica bay	1 80	36
Geo. T. Soper	614	Jamaica bay	3 10	62
Geo. T. Soper	420	Jamaica bay	1 60	32
Geo. T. Soper	611	Jamaica bay	1 20	24
Geo. T. Soper	437	Jamaica bay	1 45	28
W. T. Schmeelk	98	Jamaica bay	2 30	46
W. H. Sellers	596	Jamaica bay	1 80	36
A. K., J. H. & E. S. Tilley	23	Smithtown bay	11 83	2 37
Richard Van Houten	525	Jamaica bay	3 70	74
C. P. Vreeland	608	Jamaica bay	1 05	20
Chas. H. Vroom	Several	Long Island sound	21 45	.....
Chas. H. Vroom	Several	Long Island sound	5 15	.....
John M. Van Wyck	398	Raritan bay	80	16
W. R. Wilson	518	Jamaica bay	3 20	64
W. R. Wilson	520	Jamaica bay	9 00	1 80
Dennis F. Ward	290	East Chester bay	1 85	36
Dennis F. Ward	292	East Chester bay	2 25	45
Whaley & Thompson	93	Long Island sound	5 05	1 00
Total	.....	.....	$387 88	$54 69

ANNUAL REPORT

OF THE

FISH CULTURIST

ANNUAL REPORT

OF THE

FISH CULTURIST

Hon. James J. Fox, *Deputy Commissioner:*

Sir.— The report upon the work of the Bureau of Fish Culture of the Conservation Commission for the fiscal year ended September 30, 1914, is herewith submitted.

The reports from the foremen of the ten hatcheries which were open during the year are included in this account, also the observations made during inspection trips as to the condition of the properties, the methods employed in taking and hatching eggs and feeding the fish, the improvements suggested in the routine of operations and such additional subjects as are related to betterments and increased efficiency in general.

The total number of fish distributed during the year was 566,543,016. This shows a decrease from the yield of 1913 which was due chiefly to natural causes. In 1913 there was an enormous influx of large blue crabs in Shinnecock bay which furnished to the Long Island hatchery a very great number of eggs for development. In 1914 this source of supply was lacking. It is not uncommon to find such variations, due to the migratory habits of the species. The marine work is susceptible of very great extension with increased facilities for collecting eggs. A substantial motor boat, able to go to the Race and Fisher's Island sound for berried lobsters would enable the Commission to swell the output of lobsters to an enormous figure. It would also be a great aid in discovering the spawning grounds of the weakfish, the eggs of which should be hatched in great quantities in order to keep up the supply of a valuable food species.

The number of species propagated and distributed during the year was thirty-nine; but several of these were obtained simply for exhibition purposes and not for stocking waters. The most

important species in point of numbers sent out were shad, frostfish, whitefish, lake herring, brown trout, rainbow trout, lake trout, brook trout, smelt, maskalonge, small-mouthed black bass, yellow perch, pikeperch, tomcod, flatfish and lobsters. The policy of stocking inland lakes with whitefish and lake herring has been consistently followed because it is believed that these fish will supply a vast amount of cheap and wholesome food for the people, and it will be comparatively easy to take them by angling if all other methods of capture are forbidden. The lake trout is steadily increasing in the large inland lakes; but, on account of the contours of the lake bottoms and other natural causes, it is extremely difficult to collect the eggs in the spawning season. A very good illustration of this is found in Keuka lake, which yields many tons of lake trout for market use and home consumption throughout the fishing season and yet the number of eggs that can be obtained by the use of nets on the spawning ledges of this trout is uniformly small.

The brood trout at nearly all the stations have been liberated in public waters, and the supply of eggs, for the most part, is now obtained by purchase from commercial hatcheries. This promotes economy because the private hatcheries can furnish eggs much cheaper than we can produce them. They have the advantage of being able to market table trout at any time of the year, and the eggs are a by-product. The brown trout have been retained at Caledonia for the reason that private establishments do not propagate this species. The early spawning race of rainbow trout has also been kept at Cold Spring Harbor because of the advantage of earlier distribution of the fry and fingerlings derived from such eggs. Small-mouthed black bass are not wintered over at any of the stations except Linlithgo. It has been demonstrated at Constantia and Ogdensburg that adult fish very near the spawning condition can be taken from outside waters and introduced into the ponds when they are almost ready to deposit their eggs. This circumstance makes it possible to avoid the expense and risk of keeping adult bass through the winter. The bass are so abundant in Oneida lake and in the St. Lawrence river and other streams in the vicinity of Ogdensburg as to make the collection of gravid fish for pond cultivation very easy. Chautauqua lake is another

body of water in which the small-mouthed bass is abundant and thrifty and furnishes an ample brood stock for the ponds when required.

The growth of the small mouthed black bass in a small pond at Constantia, which was well supplied with insects and their larvae, young sunfishes and other natural fish food, was remarkable during the summer of 1914. Late in October 141 bass from four to five inches long were transferred from this pond to the hatchery troughs for distribution. The plump and clean condition of the fish was noteworthy. In company with them were numerous pikeperch to which reference is made in the notes on species. The practice of winter killing all plant and animal life in ponds during the year has worked out very advantageously at Constantia. Ponds treated in that way become richly stocked with insects, crustaceans and worms, and all that is necessary in addition is to provide some small fish for the food of the species under cultivation.

The cost of the fish distributed in 1914 was $78.46 per million. This includes every expense for the maintenance of the hatcheries and the delivery of the fish to applicants. The fish sent out were valued at about $188,000 on a basis far below the prices at commercial hatcheries.

The continued and rapid decrease in the shad fishery of the Hudson river has reduced the output of that fish from the Linlithgo station. The total distribution was only 1,403,800, of which 750,000 were fingerlings measuring four or five inches in length. One would suppose that repeated plantings of fingerling shad from that hatchery would soon begin to show results in an increased catch; but the facts are that many of the fingerlings are wrongfully taken in bait minnow nets and the adults are caught before they enter the lower waters of the river. The Hudson, furthermore, is so badly polluted and obstructed by refuse as to make it little fit as a spawning river for the shad.

The rapid increase of the pikeperch in stocked waters has become apparent to everyone who fishes, and especially in the inland lakes and ponds and in the St. Lawrence river and its large tributaries. Notwithstanding the very adhesive nature of the eggs, they are easily separated and hatched in jars during a moderate period of incubation. It has been thought that this

fish is not suitable for rearing in ponds; but evidence to the contrary is at hand, and doubtless experiments in the direction of pond culture for the pikeperch will be extended.

The acclimation of the whitefish in Adirondack lakes and other large lakes of the State has become evident, and it is practicable to take vast numbers of eggs from stocked waters. The little whitefish of Chateaugay lake has been added to the list of species propagated and will undoubtedly be found adapted for continued artificial culture. The fish was recently found in Big Clear lake and the Adirondack hatchery found the young in Big Clear lake in 1913 resulting from a plant made many years ago.

The necessity of protecting our trout stations from pollution by sewage and other causes is becoming more and more apparent every year. The State should have full control of all its supplies of spring water in order that they may be kept uncontaminated. Several trout diseases have been traced to bacteria which thrive only in polluted water. Epidemics have occurred, notably at Caledonia and Bath, which have decimated the trout and which could be entirely avoided by attention to the water supply.

It has been suggested, and it is undoubtedly true, that good results could be obtained in the planting of fish if the Commission should assign this work to its trained employees. Under the present policy of appropriations, however, the method is impossible. It is to be hoped that the funds will be so increased as to warrant not only a greater distribution but also an improved system of planting.

Recommendations for various improvements and repairs at the stations have been made from time to time. The Adirondack hatchery should have ponds or races to replace the decayed wooden races now in use; land should be acquired at Constantia on which to build a boathouse for the proper storage of boats in the service; a new dam at the Oneida hatchery is greatly needed, and a dam should be constructed on the Roeliff Jansen kill to provide a new and improved water supply for the Linlithgo station; the Bath hatchery is greatly in danger of epidemics because of the pollution of the principal spring supplying the rearing races and ponds, and an outlay of $500 would relieve this constant menace; the field work on Long Island could be enormously

expanded by the purchase of a motor boat and the construction of two inexpensive auxiliary field stations for the collection of eggs of food fish; Caledonia hatchery can be made much more effective by cleaning out the upper waters of Spring creek and by replacing decayed wooden embankments with cement; the station on Chautauqua lake could be much improved by changes in the pumping plant and by acquiring ground suitable for pond construction. State properties which are maintained at a sure profit should be kept up by appropriations to their highest point of efficiency.

A systematic study of the water life of our State should be made without delay and with the utmost thoroughness in detail. If we knew more about the species of fish and related animals and the plant and insect life which are so intimately associated with the growth of fish it would be far easier to increase the supply of edible species. In a general way we know that the State waters contain about 400 species of fish, of which more than one-half live in the ocean. The names of these species and their distribution are matters of record, but few observations have been made upon the spawning seasons and the breeding habits particularly of the smaller fishes which form the bulk of the food of the larger and more valuable forms. Information of this kind is greatly needed, and is received slowly because the number of observers in the field is very limited. New York has not done as much work in the study of the life histories of its fish as some of the other States, and yet the importance of its assets in this direction is out of all proportion to the outlay of effort and money devoted to biological surveys.

No provision has yet been made for the artificial cultivation of oysters and other shellfish in this State. The United States Bureau of Fisheries has made many experiments extending over a long term of years in the development of a system of oyster culture based to some extent upon methods employed in Europe; but the processes have not yet reached a stage at which they can be utilized commercially. The value of the oyster and clam fisheries of New York is so great as to render this subject worthy of early and careful consideration.

HATCHERY EXPENDITURES

Maintenance	$39,773 97
	*7,991 51
	$47,765 48
Repairs	2,347 83
Collecting eggs	315 41
Official salaries	4,000 00
Graded employees	9,180 00
St. Lawrence hatchery	2,036 26
Warrensburg hatchery	111 16
	$65,756 14

FISH DISTRIBUTED BY STATE HATCHERIES.

Catfish	Rainbow trout
Bullhead	Lake trout
White chub	Brook trout
Flat shiner	Smelt
Pin shiner	Pike
Rosy faced minnow	Pickerel
Horned dace	Maskalonge
Mullet	Strawberry bass
Sucker	Rock bass
Eel	Sunfish
Shad	Silver bass
Frostfish	Small mouthed black bass
Whitefish	Large mouthed black bass
Lake herring (Greenback)	Yellow perch
Lake herring (Lake Erie)	Pikeperch
Tullibee	Tomcod
Land locked salmon	Lawyer
Black spotted trout	Flatfish
Brown trout	Lobster

* This amount ($7,991.51) was incurred in the fiscal year ending September 30, 1913, but was paid in the fiscal year ending September 30, 1914.

Photo. R. E. Gooding

Fish Car Adirondack

Fish Car Adirondack — Interior Showing Refrigerator

Photo. R. E. Gooding

Photo. R. E. Gooding

FISH CAR ADIRONDACK — MESSENGERS' QUARTERS AT END

FISH DISTRIBUTED IN 1914 BY STATIONS

ADIRONDACK

Brook trout fry	288,500	
Brook trout fingerlings	153,500	
		442,000
Lake trout fry*	315,000	
Lake trout fingerlings	190,000	
		505,000
Brown trout fry	4,000	
		4,000
Whitefish fry†		4,600,000
		5,551,000

BATH

Brook trout fry	75,000	
Brook trout fingerlings	383,500	
		458,500
Lake trout fingerlings*	317,000	
		317,000
Brown trout fry‡	90,000	
Brown trout fingerlings	65,000	
		155,000
Rainbow trout fingerlings‡		116,000
		1,046,500

CALEDONIA

Brook trout fry§	68,500	
Brook trout fingerlings	93,000	
		161,500
Lake trout fry**	170,000	
Lake trout fingerlings	402,000	
		572,000

* 350,000 eyed eggs were furnished by Caledonia hatchery.
† The eggs from which these fish were developed were furnished by the Fulton Chain hatchery.
‡ From eggs furnished by Caledonia hatchery.
§ 336,000 eyed eggs received from Cold Spring harbor were poor.
** 700,000 eyed eggs were sent to the Adirondack and Bath hatcheries for development and distribution.

Brown trout fry*†.....	8,000	
Brown trout fingerlings.....	209,000	
Brown trout yearlings..	100	
		217,100
Rainbow trout fry§.....	122,500	
Rainbow trout fingerlings.....	390,000	
Rainbow trout adults.....	14,858	
		527,358
Lake herring fry¶.....		35,000,000
Maskalonge fry**		925,000
Pikeperch fry††		4,350,000
		41,752,958

CHAUTAUQUA

Maskalonge fry§§	1,225,000
Lake herring fry.....	16,000,000
	17,225,000

COLD SPRING HARBOR

Brook trout fry‖.....	65,000	
Brook trout fingerlings.....	26,500	
Brook trout adults.....	15	
		91,515
Brown trout fry.....	10,000	
Brown trout fingerlings.....	5,000	
		15,000
Rainbow trout fry.....	15,000	
Rainbow trout fingerlings.....	14,000	
Rainbow trout adults.....	50	
		29,050

*† 400,000 eyed eggs were divided between the Bath and Delaware hatcheries for development and distribution.

§ 250,000 eyed eggs were sent to Bath and Delaware stations for development and distribution and 10,000 to Ithaca for development, observation and distribution.

¶ 16,362,000 were sent to Linlithgo for development and distribution.

** The eggs from which these fry were produced were furnished by the Chautauqua hatchery.

†† The eggs which produced these fry were obtained from Oneida hatchery.

§§ 750,000 eyed eggs sent to Caledonia for development and distribution; 600,000 green eggs and 500,000 eyed eggs were sent to the Pennsylvania Commission at Union City in exchange for brook trout eggs and not included in this report.

‖ 336,000 eggs were sent to Caledonia and not included in this report.

Black spotted trout fingerlings		2,000
Whitefish fry		30,000
Smelt fry		119,000,000
Pikeperch fry†		2,150,000
Tomcod fry		96,200,000
Eels		17,000
Flatfish fry		68,000,000
Lobster fry		23,223,210
		308,757,775

DELAWARE

Brook trout fry	300,500	
Brook trout fingerlings	115,000	
Brook trout 14 months	1,150	
Brook trout 2 and 3 years	2,460	
		419,110
Brown trout fry*	31,000	
Brown trout fingerlings	102,500	
		133,500
Rainbow trout fry‡	70,000	
Rainbow trout fingerlings	66,000	
		136,000
		688,610

FULTON CHAIN

Brook trout fry	233,000	
Brook trout fingerlings	194,500	
		427,500
Lake trout fry		45,000
Land locked salmon fingerlings§		12,000
Whitefish fry¶		10,372,000
Frostfish fry		322,000
		11,178,500

† The eggs which produced these fry were obtained from the Oneida hatchery.
* The Brown trout were produced from eggs furnished by the Caledonia hatchery.
‡ The Rainbow trout were developed from eggs obtained from the Caledonia hatchery.
§ The eggs which produced these fish were obtained from the United States hatchery at Cape Vincent.
¶ 2,100,000 eggs were sent to the Adirondack hatchery and 19,446,000 eggs were sent to the Oneida hatchery for development and distribution and not included in this report.

LINLITHGO

Shad fry*	653,800	
Shad fingerlings	750,000	
		1,403,800
Brook trout fry†	137,000	
Brook trout fingerlings	50,500	
		187,500
Lake herring fry‡		16,500,000
Pikeperch fry§		2,300,000
Yellow perch fry¶	8,000,000	
Yellow perch yearlings	1,000	
		8,001,000
Black bass, small mouth, adv fry**	20,700	
Bl'k bass, small mouth, fingerlings	1,500	
		22,200
		28,414,500

ONEIDA

Catfish adults		3
Bullhead fingerlings	5	
Bullhead adults	4	
		9
White chub fingerlings	3	
White chub adults	2	
		5
Flat shiner fingerlings		6
Pin shiner		3
Rosy faced minnow		1
Horned dace		4
Mullet fingerlings	3	
Mullet adults	2	
		5
Sucker fingerlings	6	
Sucker adults	2	
		8

* 1,000,000 Shad fry were received from the Pennsylvania Commission in exchange for Pikeperch eggs furnished by the Oneida hatchery.

† 30,000 eggs were obtained from the Pennsylvania Commission in exchange for Maskalonge furnished by the Chautauqua hatchery.

‡ These fry were produced from eggs collected in Sodus bay by the Caledonia hatchery.

§ The eggs which produced these fry were obtained from the Oneida hatchery.

¶ 140 quarts of Yellow Perch eggs were obtained from Mr. E. C. Brown in exchange for eggs of Brook Trout and Lake Herring.

** 50,000 Black bass fry were received from the Oneida hatchery for further development.

Eels		4
Whitefish fry *		16,128,000
Tullibee fry		5,250,000
Stone pike fingerlings		6
Pickerel adults		4
Pikeperch fry †	29,700,000	
Pikeperch adults	38	
		29,700,038
Yellow perch fry	100,000,000	
Yellow perch adults	9	
		100,000,009
Black bass, small mouth, fry‡	250,000	
Black bass, small mouth, fingerlings	100,000	
Black bass, small mouth, adults	18	
		350,018
Black bass, large mouth, fingerlings	4	
Black bass, large mouth, adults	2	
		6
Strawberry bass adults		4
Rock bass fingerlings	6	
Rock bass adults	9	
		15
Sunfish fingerlings	5	
Sunfish adults	11	
		16
Silver bass fingerlings	4	
Silver bass adults	3	
		7
Lawyer adults		2
		151,428,173

ST. LAWRENCE

Black bass, small mouth, fry	500,000	
		500,000

* These fry were produced from eggs obtained from the Fulton Chain hatchery.

† 366 quarts of Pikeperch eggs were sent to the Caledonia, Cold Spring harbor and Linlithgo hatcheries and the Pennsylvania Commission, and do not appear in this report.

‡ 50,000 small mouth Black Bass fry were sent to the Linlithgo hatchery for further development and are not accounted for in this report.

FISH DISTRIBUTION IN 1914 BY STATIONS

Adirondack	5,551,000
Bath	1,046,500
Caledonia	41,752,958
Chautauqua	17,225,000
Cold Spring Harbor	308,757,775
Delaware	688,610
Fulton Chain	11,178,500
Linlithgo	28,414,500
Oneida	151,428,173
St. Lawrence	500,000
	566,543,016

FISH DISTRIBUTION, 1911-1914

	1911	1912	1913	1914
Adirondack	7,416,877	4,610,059	7,068,810	5,551,000
Bath	1,020,461	1,274,545	768,000	1,046,500
Caledonia	49,140,150	30,132,750	38,007,411	41,752,958
Chautauqua	23,221,725	14,020,100	19,267,000	17,225,000
Cold Spring Harbor	347,650,400	401,554,422	890,878,105	308,757,775
Delaware	821,500	994,517	973,500	688,610
Fulton Chain	5,201,050	7,467,010	9,378,009	11,178,500
Linlithgo	25,657,983	49,436,379	73,273,129	28,414,500
Oneida	236,318,248	220,945,151	247,641,156	151,428,173
St. Lawrence	.....	.....	.....	500,000
	701,448,394	730,434,933	1,287,255,120	566,543,016

FISH DISTRIBUTION BY SPECIES

Catfish adults	3
Bullhead fingerlings	5
Bullhead adult	4
White chub fingerling	3
White chub adult	2
Flat shiner fingerling	6
Pin shiner	3
Rosy faced minnow	1
Horned dace	4
Mullet fingerling	3
Mullet adult	2

Sucker fingerling	6
Sucker adult	2
Eel adults	17,004
Shad fry	653,000
Shad fingerling	750,000
Frostfish fry	322,000
Whitefish fry	31,130,000
Lake herring fry	67,500,000
Tullibee fry	5,250,000
Land locked salmon fingerling	12,000
Black spotted fingerling	2,000
Brown fry	143,000
Brown fingerling	381,500
Brown yearlings	100
Rainbow fry	207,500
Rainbow fingerling	586,000
Rainbow adults	14,908
Lake fry	530,000
Lake fingerling	909,000
Brook fry	1,167,500
Brook fingerling	1,016,500
Brook adults	3,625
Smelt fry	119,000,000
Stone pike fingerling	6
Pickerel adults	4
Maskalonge fry	2,150,000
Strawberry bass adults	4
Rock bass fingerling	6
Rock bass adults	9
Sunfish fingerling	5
Sunfish adults	11
Silver bass fingerling	4
Silver bass adults	3
Small-mouthed black bass adv. fry	20,700
Small-mouthed black bass fingerling	101,500
Small-mouthed black bass fry	750,000
Small-mouthed black bass adults	18

Large-mouthed black bass fingerling	4
Large-mouthed black bass adults	2
Yellow perch fry	108,000,000
Yellow perch adults	1,009
Pikeperch fry	38,500,000
Pikeperch adults	38
Tomcod fry	96,200,000
Lawyer adults	2
Flatfish fry	68,000,000
Lobster fry	23,223,210
	566,543,016

THE HATCHERIES

ADIRONDACK STATION

The work at this station has been very successful during the past year. We succeeded in collecting the usual number of brook trout and lake trout eggs from the ponds on the hatchery preserve with the exception of Bone pond, where there were very few trout of spawning age. There were a nice lot of small fish which will spawn another year.

I would suggest that a protector be employed to watch Little Clear, Green pond and Bone pond as the poachers get in there and rob the lake both in summer and winter.

The output of brook trout was not as large as usual for we failed to get more than about one-half as many eggs from the commercial hatcheries as heretofore. The fingerling trout this year were unusually large as we had more room to feed them and we kept them in the hatchery until later in the shipping season.

The lake trout eggs that were shipped here from Caledonia were fine and turned out a nice lot of fry and fingerlings.

There are large numbers of small whitefish in both Big and Little Clear lakes, and with the right kind of protection we will be able to get all our eggs from these lakes.— *Reported by William H. Burke, Acting Foreman, Upper Saranac, N. Y.*

Bath Station

I am pleased to state, in making my report for the fiscal year ending September 30, 1914, that it has proved a very successful one. Trout eggs were shipped to us from commercial hatcheries and gave us good results. Our fry were free from gill disease, which had caused us some trouble in the past. This, I think, was prevented by free use of salt early in the season.

Very little difficulty was experienced in distribution which was completed August 6th, Lake Keuka receiving the largest consignment of lake trout fingerlings. This lake should receive a liberal supply each year as a great many thousand fish are caught out annually.

As the conditions at this station and the repair work that must be done are fully understood, I hope the Commission will be able to give us the necessary funds so that this work can be started at the close of next year's distribution.— *Reported by Henry Davidson, Foreman, Bath, N. Y.*

Caledonia Station

The fish cultural work at this station has progressed very satisfactorily during the past year. We have shipped 41,753,100 fish, and have also furnished 17,722,000 eggs to other hatcheries. John Roberts had fair success gathering lake trout eggs at Georgian bay last fall. Our output of brook trout and brown trout was short this year, because the eggs were not good. We were successfull in hatching and distributing the maskalonge that were sent here from Chautauqua hatchery. The pikeperch eggs obtained from Constantia were hatched out and produced a fine lot of fish.

With the help of Claude DoVille, our work at Sodus bay collecting ciscoe eggs was a success. The fishermen of Sodus bay are very much pleased with the results of planting fish there. They say there are millions of small fish to be seen in the bay.

We have done no repairing this year on account of lack of funds to buy material and pay for help; but a lot of repairs should be made another year. The grounds never looked better than they do now. There have been a good many visitors at the station from all parts of the United States. It was a common thing to see from 600 to 700 automobiles here on a Sunday.

I think it would be a good idea to plant some of the ciscoes hatched from Sodus bay eggs in some of the inland lakes of the state, for they are caught with a hook and line, and I think the people would be well pleased with them.— *Reported by Frank Redband, Foreman, Mumford, N. Y.*

CHAUTAUQUA STATION

I submit herewith my report for this station for the year ending September 30, 1914:

While our work was not as extensive as it has been in former years, it was successful. Our take and hatch of lake herring eggs was the largest we ever had. The herring eggs were collected at Erie, Pa. Much credit is due to the Pennsylvania Commissioner of Fisheries and Superintendent Hartman, of Erie, for the able assistance and courtesy shown by them. We secured our full capacity of eggs at Erie and so did not go to Dunkirk for any. The herring eggs hatched and were planted in Lake Erie, at Dunkirk, during the month of March.

In April we commenced getting ready for net fishing in Chautauqua lake, to collect maskalonge eggs. While we did not run as many nets as usual the take of eggs and percentage of hatch was about in the same proportion to the nets used as heretofore. There is no perceptible gain in the number of maskalonge caught in the nets. We furnished green and eyed maskalonge eggs to the Pennsylvania Commission in exchange for other eggs, and sent eyed maskalonge eggs to the Caledonia hatchery to fill the up-state applications. We finished the maskalonge hatching and distribution in June. We tried holding some of the maskalonge in hatching boxes, hatchery troughs and outside cement ponds in water that came from the flowing well with no results in any of the places.

The Jamestown, Westfield and Northwestern railway furnished free transportation for fish and messengers this season, which enabled us to get in and out with the fish. This transportation was not furnished previously.— *Reported by Grant E. Winchester, Foreman, Bemus Point, N. Y.*

Photo. Chas. W. Palmer

Cold Spring Harbor Hatchery — Southern View, 1914

COLD SPRING HARBOR STATION

Our work during the fiscal year ending September 30, 1914, has been satisfactory. All losses of eggs or fry were caused by rough weather or other unavoidable conditions. With the supply of cold artesian well water the eggs, fry and stock trout have been kept in fine, healthy condition.

The courtesy shown us in previous years by the Southside Sportsmen's club of Long Island, at Oakdale, permitting us to collect trout eggs from their ponds was again extended this season.

During December and January the usual collection of tomcod eggs was made at Good Ground. Having no place to keep these eggs until shipment to the hatchery, except in floating boxes on the bay, and having very rough waters, we met with heavy losses; but as the fishing season lasted longer than usual we succeeded in filling the jars.

The collection of winter flatfish in February and March was unusually good and the eggs were better than ever before. About the middle of March the smelt arrived. We filled all our jars before the run of fish was over with a fine lot of eggs. Some loss was caused by overloading the hatching jars. Many millions of fry were planted in the creeks about Long Island and several shipments of fry and eggs were sent to lakes up the state.

Twenty quarts of pikeperch eggs were sent here from Constantia hatchery, arriving in fine condition, and the fry were planted in Lake Ronkonkoma, L. I. This lake being very deep and cold is well suited for such fish. An investigation of this lake should be made to ascertain the results of stocking.

Several shipments of fish were taken from the New York Aquarium by our men and placed in public waters of Westchester and other counties. Early in May the auxiliary hatchery at Montauk, L. I., was opened for salt water work. A good supply of lobster eggs had been collected; but, to curtail expenses, work was stopped on July 15. We were still getting lobster eggs and the sea bass and scup were just beginning to spawn. The output of lobster fry was not as large as in previous years; but this was not caused by a scarcity of lobsters, but it was due to a lack of confidence which outside fishermen have in the protection we offer them while handling berried lobsters, owing to which they took their catch to other markets. The work at this auxiliary station is

successful; but as we closed down early some very important work was cut out, notably the stocking of north shore bays with adult blue crabs and their eggs. In the summer of 1913 blue crabs were plentiful in Flushing bay, and during this past summer quite a number have been caught in Lloyd's harbor, showing good results from our previous planting.

Of the many food fishes in the waters of New York state a large number are found in the waters about Long Island. The sea bass, scup, cod, tomcod, flatfish and lobsters are the most important, as they are caught in large quantities and furnish a great amount of cheap food. The records show that carloads are shipped to market daily. Tomcod are caught in December and January, flatfish in February and March, and the receipts from these carry many families through the long winter. In the bays of the north side of Long Island, where we have planted flatfish, they were never known to be so plentiful as this summer. The tomcod made a good showing this spring and are now being caught quite plentifully. Smelt are found in most brooks where they were never known to exist before stocking with the fry.

Some changes and improvements have been suggested through which the output of this hatchery could be greatly increased at a small expenditure of money, by changing our hatchery tables into a battery system, and by furnishing better equipment for collecting eggs.

The grounds have been kept in fine order and have been admired by many visitors this summer.— *Reported by Charles H. Walters, Foreman, Cold Spring Harbor, N. Y.*

DELAWARE STATION

This has been a satisfactory year of work at the hatchery considering the number of eggs sent here. We received the usual quota of brown and rainbow trout eggs; but the number of brook trout eggs was considerably smaller than last year. The brook trout eggs were not up to the usual standard. After hatching they did not seem strong, and the fry were weak and small, consequently there were a good many cripples and deformed fish among them. As we did not receive applications calling for all our brown trout and rainbow trout fry and fingerlings, these were planted in nearby suitable waters on application from the Com-

mission. Owing to lack of funds, we were ordered during the latter part of June to plant all of our fish of every description. These included over 3,000 brook trout ranging in age from fourteen months to three years. The trout were planted by people living near the station who drove to the hatchery for them. The Delaware river, Mill brook, Plattekill and Whortleberry were stocked in this way and the fishing in those streams during the coming year ought to be much improved.

The usual display of flowers in beds and boxes was made during the summer. No repairs of any kind have been made during the past season.— *Reported by H. E. Annin, Foreman, Margaretville, N. Y.*

FULTON CHAIN STATION

The brook trout fry and fingerlings during this year were the finest that we have ever raised. We had better results in collecting whitefish eggs than ever before. The first eggs were taken November 6th and the last November 18th. During this time we took 33,138,000 eggs of which 11,592,000 were kept in the hatchery, 19,446,000 were sent to the Oneida station and 2,100,000 to the Adirondack hatchery. We obtained 50,000 lake trout eggs from trout caught in the whitefish nets. The first eggs were taken October 24th and the last November 18th. These eggs were hatched and the fry were planted in the waters in which the eggs were collected.

We received a shipment of land locked salmon fry from the United States hatchery at Cape Vincent which were kept here until June 30th, on which date we shipped 12,000 fingerlings to Lake George.

The number of applications filled during the year was 209.— *Reported by William H. Burke, Foreman, Old Forge, N. Y.*

LINLITHGO STATION

The output of this station was not as large as usual because the facilities for collecting shad eggs were poor. Only a few shad eggs were obtained from two fishermen who took the eggs, cared for them themselves, put them aboard the train and sent them to the hatchery. No river herring eggs were secured at all, and only one-third as many pike perch eggs were received as in the previous year.

The brook trout eggs averaged a high percentage in hatching, but when they reached the fingerling size a sudden rise in the temperature of the water killed many of them.

The greenback herring eggs from Sodus Point gave the best of results. We received 140 quarts of yellow perch eggs from Mr. E. C. Brown, of Copake, N. Y., in exchange for brook trout and greenback herring.

The Pennsylvania Commissioner of Fisheries gave us 1,000,000 shad fry in exchange for pike perch eggs from the Oneida station. These fry were placed in our rearing ponds and cared for the same as usual, and, when liberated early in September, some of them had attained a length of six inches.

Very little repair work has been done this season. I was sent to the new hatchery at Ogdensburg on May 1st, and after July 15th only one man was left in charge of the Linlithgo station.—*Reported by Wallace D. Rhines, Foreman, Linlithgo, N. Y.*

ONEIDA STATION

On November 12 to 20, 1913, we obtained fifty-one quarts of tullibee eggs from Oneida lake. During that time we had a heavy "blow," lasting three days, which did considerable damage to all nets. On November 21st we received instructions to stop fishing as we would obtain 463 quarts of whitefish eggs from Old Forge. This made a total of 514 quarts of eggs in the hatchery.

All of these eggs were in fine condition and showed very little fungus at any time during the winter. They commenced to hatch April 1, 1914.

From the tullibee eggs we planted 3,250,000 fry in Oneida lake and sent 2,000,000 fry to applicants. Of the whitefish fry 13,328,000 were liberated in Oneida lake and the balance, 3,000,000, were shipped to applicants.

On April 1, 1914, we commenced to fish for pikeperch. From April 10th to 23d we collected 642 quarts of eggs from 1,581 females, using 5,639 males to fertilize the eggs. Eggs of this species amounting to 366 quarts were shipped to Caledonia, Cold Spring Harbor, Linlithgo and the Pennsylvania Commission; the remaining 277 quarts were placed in the hatchery jars.

The eggs commenced to hatch May 12th. We shipped 9,700,000 fry and planted 20,000,000 in Oneida lake.

During our pikeperch fishing we caught gravid yellow perch from the eggs of which we obtained 100,000,000 fry for planting in Oneida lake.

From April 22d to May 14th we placed 377 black bass in the hatchery ponds, 200 males and 177 females. From the eggs of these fish we shipped, from May 31st to June 30th, 50,000 advanced fry to Linlithgo station, 54,000 advanced fry to 131 applicants and deposited 296,000 advanced fry in Oneida lake. We also shipped to applicants 2,700 black bass fingerlings and placed 100,000 fingerlings in Oneida lake. We were obliged to place our advanced fry and fingerlings in the lake before the water in the hatchery reservoir reached the low level of former years.

We have built new walls and concrete floor in the stripping house, and placed new sills under the building. We have built five new cypress tanks — four in the stripping house and one outside.

In pond No. 4, at the hatchery, we have laid 160 feet of four-inch cast iron supply pipe west of the present inlet. This gives a flow of water from both ends of the pond. In pond No. 3 we have rebuilt the penstock.

We have had some trouble with the old wooden flume conveying water from the hatchery reservoir to the bass ponds. The boards are rotten and the flume is constantly caving in.

The west end of the hatchery building, which has been settling for some years, has been raised. New foundation wall and sill have been placed under it. One new head trough has been built in the hatchery and new sides put on two others.

From August 31st to September 4th there were sent to the State Fair at Syracuse 135 fish comprising 86 adults, 47 fingerlings and 2 yearlings representing 24 different species found in Oneida lake.

About July 20, 1914, we learned that the rosy-faced minnow had been found in Angevine's bay. Specimens were obtained and sent to the office for identification. A single additional specimen was secured later.— *Reported by Dan E. Miller, Foreman, Constantia, N. Y.*

ST. LAWRENCE STATION

While still acting as foreman of the Linlithgo station, I was sent here May 1, 1914, to take charge of this property. The only complete piece of work that I found upon arrival was the electric power house and pump. None of the ponds was in shape for bass hatching. With only five men, and none of these men of experience in the work, we, by heroic efforts, got three of the large ponds in fairly good condition and put therein 250 small mouthed black bass. These parent fish produced at least 500,000 fry and fingerlings. The old fish and their young were returned to the St. Lawrence and Oswegatchie rivers about August 15th. Some of the young bass were two and one-half inches in length.

I think without doubt that this station can be made the most successful bass hatching station in the State. It is a pumping station. The temperature of the water is, therefore, more uniform than in any other station where bass are reared. The sudden fall of temperature in other waters where bass are raised is fatal to the eggs. Drawing our water supply direct from the St. Lawrence, the water remains practically the same during egg incubation. Many changes must be made in the inlet and outlet of the ponds before they can be used to the best advantage.

Little food was required for the parent bass in the early part of the season, as shad flies and minnows were abundant and the bass preferred them to fish cut into pieces. One of the ponds did not give good results. Some of the parent fish died. I think the nature of the soil was the cause of it. The soil was a mixture of bog iron and muck, and when the water was first put in a sort of greasy film gathered on the surface of the pond. Before the water was let out in August it seemed to have purified itself and the fish regained their former vigor. I think it will be all right next year.

Some of the pond banks have been graded and seeded. The sum of $1,000 was allowed for repair work on the dwelling-house, and up to October 1, 1914, $750 had been expended. A new cellar wall had been built of concrete under the entire house and a drain of 300 feet laid thereto. Lumber and shingles enough to finish the repair work are bought and paid for, but the labor has not yet been completed. A huge pile of stone was given to us by

Mr. George Kelsey, a neighbor, and they will be very much needed in further pond repair work.

New line fences must be built in the early spring. A motor boat and a horse and wagon are very much needed. Plenty of brood bass can be caught, but a boat and a horse are necessary to get them to the station. The barn needs repairs and an ice house should be built this winter.— *Reported by Wallace D. Rhines, Acting Foreman, Ogdensburg, N. Y.*

NOTES ON SPECIES

ROSY FACED MINNOW (*Notropis rubrifrons*)

Foreman Dan E. Miller contributes the following notes on this beautiful little minnow:

"In regard to the rosy faced minnow, I find on or about July 6, 1914, these fish were found in a small bay west of Angevine's, on the north shore of Oneida lake. I sent my son to get some of them, which I sent to you. I find that, on July 20th, in using these minnows for black bass bait, in placing them on the hook, the spawn came from them very freely. They are very quick and lively fish. When taken out of the water the back is green, sides and belly silvery, fins yellow, nose and nape covered with small prickles, nose and face pinkish. This is a very pretty fish, about three to four inches long.

These minnows have never been seen in this lake before, and we presume they have worked up from Lake Ontario through the Barge canal (Oswego river) to Three River Point, then up Oneida river into the lake. At the time they were used for bait, the bass struck them several times, and in any ordinary fishing season I would expect to hear of good catches from them."

SHAD

Permits to catch shad on Friday and Saturday nights for the purpose of furnishing eggs to the Linlithgo station were issued on May 1, 1914, to Albert Munson, of Port Ewen, and Jacob Pindar, of Rhinecliff. The season was a very unfavorable one, and the number of eggs secured was small; but the Pennsylvania Commission of Fisheries gave the State 1,000,000 fry in exchange

for pikeperch eggs. The rearing of the fry in a small pond at Linlithgo was one of the most remarkable successes of the year.

FROSTFISH

The total number of eggs of this species obtained for the Fulton Chain hatchery in 1913 was 368,000, which were collected from November 29th to December 3d inclusive in Big Moose lake. The greatest number of eggs secured in one day was 115,000 on November 30th.

WHITEFISH

Eggs of the Labrador whitefish were collected by Foreman Burke of Old Forge from November 6th to November 18th, both inclusive, in the channel between the Third and Fourth lakes of the Fulton Chain. The greatest number of eggs collected in one day was 6,006,000 on November 13th. The total was 38,138,000, which were divided among the Oneida, Adirondack and Fulton Chain hatcheries. These eggs are estimated at 42,000 to the quart.

Whitefish eggs were obtained from Big and Little Clear lakes for the Adirondack hatchery from November 3d to 15th inclusive. The greatest number in one day was 630,000 on November 7th. The total collection was 4,074,000 eggs.

LAKE HERRING (*Leucichthys artedi*)

In Lake Erie the egg-taking season extended from November 29th to December 7th, both inclusive. The maximum number of eggs taken in one day was 7,575,000 on December 3d.

Men were sent from the Chautauqua hatchery and they were assisted by employees of the Pennsylvania Commission of Fisheries.

The number of eggs obtained from the Pennsylvania Commission through Superintendent Hartman of the Erie hatchery was 188 quarts. These eggs were estimated at 101,000 to a quart.

TULLIBEE (*Leucichthys tullibee*)

The annual destruction of tullibee by lampreys in Oneida Lake had begun late in June, 1914. On the 28th I saw about twenty

of the dead tullibees floating at the surface in various parts of the lake. The tullibees seemed to be attacked in the deepest water. It would be highly beneficial if some effective measures were applied for the destruction of these worthless parasites which destroy, not only the tullibee, but also black bass and pikeperch in great numbers.

Land-Locked Salmon

Two years ago quite a number of land-locked salmon were caught from these waters — we knew of twenty or more averaging in weight better than ten pounds, and the fishermen who landed them could fill a book with the stories they tell of the exciting fights they enjoyed. We are not so well informed as to the results of last year's fishing though some good sized salmon are said to have been caught. These fish were usually caught when deep trolling for trout, and some of the largest specimens have been taken on the eastern shore of the lake in the vicinity of the "calf-pen" near Pilot Knob, about the deepest portion of the lake. We have no reports indicating that any have been taken north of the "Narrows."— Extract from letter of E. A. Knight, Secretary, Lake George Association, dated March 30, 1914.

Brown Trout

In the fall of 1913 the brood trout at Cold Spring Harbor hatchery yielded their eggs very freely. Some of the fry were feeding on January 13, 1914.

At the Adirondack station, brown trout eggs were collected from November 1st to November 10th inclusive.

The first eggs of brown trout at Caledonia hatchery were secured October 27, 1913.

Rainbow Trout

Mr. C. H. Putnam, Auburn, N. Y., wrote under date July 6, 1914, to Chairman Van Kennen as follows:

"Last summer we put rainbow fingerlings in several streams, in addition to the native trout, and where no rainbows had previously been planted; during the past two weeks the writer has done considerable fishing on Dutch Hollow brook and on the

Hemlock stream at Locke, and in both of these streams I have caught a large number of rainbow trout from five inches to seven and one-half inches in length, all of which have been returned to the stream. On the Hemlock stream, in almost every riffle, a rainbow will rise to the fly."

STEELHEAD TROUT

On May 4, 1914, some eggs of steelhead trout were received in fine condition at the Cold Spring Harbor hatchery. These were presented by the United States Bureau of Fisheries from one of its hatcheries in the State of Washington. The fish developed from these eggs were planted in Long Island waters.

BROOK TROUT

Eggs of this species were collected from October 18 to November 26, 1913, for the Adirondack hatchery in Little Clear lake and Bone pond and from brood fish at the station. The maximum number of eggs was taken November 5th — 15,375. The total number was 108,000.

The Fulton Chain hatchery secured eggs of this trout from October 13 to November 2, 1913, from Middle Branch, Old Forge pond and Fourth lake. The total collection was very small.

Mr. C. H. Putnam, of Auburn, N. Y., writing on July 6, 1914, states the following about brook trout:

"As to the native brook trout, I think from the large number of trout running close to seven inches that we are catching fish planted last summer."

LAKE TROUT

The egg-collecting season at the Adirondack hatchery began October 19, 1913, and ended on November 19th. They were obtained from Big Clear and Little Clear lakes and Green pond. The total number was 161,000. From the Caledonia hatchery were sent 350,000 lake trout eggs for development and distribution.

Eggs of this fish were collected in the channel between the Third and Fourth lakes of the Fulton Chain from October 24 to November 18, 1913, both inclusive. The total was small, numbering only 52,756 eggs. The greatest number obtained in one day was 10,900, on November 5th.

MASKALONGE

The first eggs in 1914 were taken April 27 and the last on May 10. The total number secured was 4,420,500 from 126 gravid females. There were 593 ripe males.

The number of eggs to the quart was estimated at 42,000.

With the maskalonge there were taken in the pound nets black bass, carp, billfish and bullheads. The last in large numbers. On May 16, 1914, there were sent to the Caledonia Hatchery from Bemus Point 750,000 eyed eggs. Eggs were also given in exchange to the Pennsylvania Commission of Fisheries.

BANDED PICKEREL (*Lucius americanus*)

Two specimens of the banded pickerel, known as mud pike at Amenia, N. Y., were sent to the Commission December 31, 1913. These were preserved in alcohol and have been sent to the State Museum in Albany. These pickerel were taken by W. H. Bartlett, of Amenia. The larger one is 13 inches long.

Mr. Bartlett contributes the following additional notes in a letter of January 7, 1914:

"The banded pickerel has been here a good many years, but not until last summer has there been any attempt to fish for it. The lake had become very full of bullheads and the boys fished for them extensively, and commenced catching these pickerel. I found this out and commenced fishing for them myself with live bait and caught a number of them. It became noised around and there were several that would fish all day catching from 15 to 30. I found the little lake was full of them."

BLACK BASS

Dwight Lydell, Assistant Superintendent of the Michigan Fish Commission, uses a great many crayfish for the food of black bass during spring and fall. During the warm part of June, July and August, the adult bass are fed almost wholly on liver prepared in a manner described by Mr. Lydell in an early report.

What Mr. Lydell desires most of all is a large pond to be used exclusively for breeding minnows with the overflow running direct into the bass rearing ponds, and screened so as to let the fry through and keep out the large minnows.

PIKEPERCH

Up to April 27, 1914, the Oneida Station had 731 quarts of eggs. Of these, 225 quarts were sent to Pennsylvania, 30 quarts to Linlithgo, 20 quarts to Cold Spring Harbor, and 90 quarts to Caledonia. Mr. Miller counts 386 quarts in the hatchery. His applications call for 8,775,000 and he expects to plant 20,000,000 in Oneida lake.

The breaking of the Southwell dam caused a loss of nine nets which were full of good fish. The season has been a very unfavorable one.

On June 28, 1914, pikeperch measuring from two to two and one-half inches in length were found in Spring pond, which is the lowest pond on the Oneida Hatchery grounds at Constantia. The fry entered this pond accidentally on May 8, so that the specimens obtained were then six weeks from the fry stage. On October 25, 1914, when the Spring pond was drained these pikeperch had grown to a length of four inches or upwards. About 100 pikeperch were taken out of the pond which is less than one-eighth of an acre in area, and associated with them were 144 small mouthed black bass ranging from four to four and one-half inches in length which were in very plump condition. The fish in the pond subsisted entirely upon natural food. The water was full of insect larvae, litle sunfish and small crayfish, worms, etc.

YELLOW PERCH

By an exchange with Mr. E. C. Brown, of Copake, N. Y., the Linlithgo Station received 148 quarts of yellow perch eggs on April 24, 1914.. Foreman Rhines has counted as high as 65,000 eggs in a quart, and the average is probably more than 50,000.

Of the above eggs about 95 per cent. were found to be good.

TOMCOD

The eggs of tomcod collected by Foreman Walters in Long Island bays in the winter of 1913–1914 were very unsatisfactory. They could not be fertilized. Mr. Walters filled his jars and emptied over one-half of the eggs in the sewer, then filled them again.

The best eggs were obtained on January 13 from the vicinity of the fish car in which the tomcod were confined. The eggs were skimmed from the sandy bottom by means of a small dipnet made of fine mill net.

BURBOT

On January 6, 1914, there was received from M. J. Clarke, Game Protector, Schuyler lake, N. Y., a burbot, eighteen and one-half inches long, which was caught through the ice in Canaderaga lake on live bait while fishing for pickerel.

LOBSTER

An inspection of the auxiliary marine hatchery at Montauk, June 15 and 16, showed that the salt water pumping plant was doing excellent work, although it required very careful handling to keep it in shape. The egg bearing lobsters at that time were decreasing in numbers. The first eggs which were placed in jars were obtained May 21. An unusually large lobster taken by G. H. Ross furnished 26 ounces, equalling 158,340 eggs. The average female egg bearing lobster this season measured from 12 to 13 inches and yielded about 25,000 eggs.

The otter trawl catches the largest lobsters — such as are too large to enter the pot. Most of the berried lobsters come from Shagwung Reef and Gardiner's Island. A boat that could go to the Race and Fisher's Island Sound would enable the Commission to treble the output of lobster fry since the greatest number of large lobsters is to be obtained in those places.

Many permits were issued this season to lobster fishermen in order to enable them to take egg bearing lobsters for delivery to employees of the Commission at Montauk.

TROUT FOOD

Professor G. C. Embody, of Cornell University, in writing about some experiments in feeding trout, makes the following statement:

"We tried Lane's food, or rather a modification of it, with some success two years ago. We dried it, and then reground into a very fine meal. In this state we could preserve it indefinitely in tight jars. We had better success by merely sprinkling a little of the dried meal over the rearing trough. It floated and the young fishes took it readily from the surface. I think, however, from last year's experience, that rainbows prefer the dried fish, taking the fine meal from the surface. What is not eaten floats off through the outlet."

COURTESIES

The Commission has made exchanges from time to time with the Commissioner of Fisheries of Pennsylvania, Hon. N. R. Buller, through which the State obtained brook trout eggs, lake trout and shad, giving in return eggs of the pikeperch and maskalonge. Commissioner Buller has also given much assistance in the gathering of lake trout eggs in Lake Erie.

Thanks are due to the Assistant Secretary of the Smithsonian Institution, Washington, D. C., for the identification of specimens of hydra which were found parasitic upon eggs and embryos of brook trout at the Adirondack Station. The species sent for examination proved to be *Hydra fusca.*

Mr. E. Tinsley, Superintendent of Game and Fisheries, Toronto, Ontario, granted the Commission the privilege of collecting lake trout eggs in Owen Sound during the open season, and a good quantity of eggs was secured from that locality.

The railroads operating within the State have ably assisted the work of the bureau by providing transportation for the employees of the hatcheries engaged in the distribution of fish and eggs to public waters.

Respectfully submitted,

TARLETON H. BEAN,
Fish Culturist.

Albany, N. Y., December 31, 1914.

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